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U. S. DEPARTMENT OF AGRICULTURE

REPORT OF THE

Secretary of Agriculture

1954

The Secretary of Agriculture

Reports

on the work of the United States Department of Agriculture for the year 1954

Ezra Taft Benson

Secretary

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DEPARTMENT OF AGRICULTURE,
Washington, D. C.

THE PRESIDENT,
The White House,
Washington, D. C.

DEAR MR. PRESIDENT: In his fourth annual message to the Congress, December 1864, President Lincoln pointed out, "The agriculture department . . . is peculiarly the people's department in which they feel more directly concerned than any other."

In spite of the growth of the Federal Government and the extraordinary exodus from farms since Lincoln's day, his statement is still substantially true.

In the Department of Agriculture, we are primarily concerned with the welfare of American farmers and the stability of American agriculture. Our actions, however, directly affect not only farmers but all Americans. We are responsible for widespread programs that in no small part determine the kind of food Americans eat, the quality of clothes they wear, and the amount of certain essential raw materials their factories will have available.

The employees of the Department of Agriculture are proud of the role it has played in the remarkable progress of American agriculture. This progress is the envy of the world. The United States agricultural worker now produces on the average enough food and fiber for himself and 18 other persons. This high rate of production permits the great majority of our working population to turn out goods and services instead of raw materials. It has made possible the American standard of living.

Thus, agriculture directly and indirectly touches the lives of all our people. And the Department of Agriculture is truly, as Lincoln said, the people's department.

For this reason, I know you are particularly interested in the report which follows. This report describes the efforts we are making in the Department to assist farmers and to help solve the problems of American agriculture as a whole. It outlines the administrative and program actions we have taken in order to do our job better. And finally, it shows the progress American farmers have made during the past year and the outlook for their future.

I transmit herewith the annual report of the Department of Agriculture for 1954.

Respectfully yours,

Secretary of Agriculture.

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REPORT OF THE

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1954

AGRICULTURE MOVES FORWARD

During 1954, which might well be called a year of "cold peace," the Department of Agriculture continued its vigorous efforts to promote economic stability and progress in efficiency throughout United States agriculture.

Serious problems continued to confront agriculture: Problems inherited from preceding years; problems that had in part grown out of past periods of hot war and cold war; problems that required new and better program tools than had yet been made available. There were the cost-price squeeze, the mounting store of surplus commodities, and the low position of agricultural exports. There were production adjustments that had to be made, as well as badly needed changes in the price support structure. It should be noted, however, that although net realized farm income for the United States as a whole declined, the per capita income of farm people from all sources rose between 1953 and 1954.

These problems were attacked with both legislative and administrative weapons. With the support of the Congress and the cooperation and advice of the American farmer, we are moving ahead. We are making progress.

In 1953, we asked the people in the Nation who were most concerned with the problems of American agriculture—the farmers themselves, their organization leaders, and the technicians and experts in the agricultural field—to advise us on price support needs. Their suggestions were used in an intensive study of the entire subject which provided a basis for legislative action.

Under the Agricultural Act of 1954, we are going to administer flexible price supports on the basic commodities, beginning with the 1955 crop, at a level ranging from a minimum of 82.5 percent of parity to a maximum of 90 percent for 1955 and from a minimum of 75 percent to a maximum of 90 percent in following years.

Wheat is the only basic crop to be supported at the minimum level of 82.5 percent of parity in 1955. Cotton, peanuts, and tobacco will be supported at about 90 percent of parity and corn at 87 percent of parity. In addition this law, through incentive supports, encourages badly needed production by the domestic wool industry and provides increased authority for channeling dairy surpluses to consumers. The set aside of $2.5 billion worth of commodities held by the CCC, which the Act also provides for, will enable these flexible price supports to come into effect in an orderly manner.

Last year, Congress also passed a companion law, the Agricultural Trade Development and Assistance Act of 1954, which authorizes the exchange of $700 million worth of surplus farm commodities for foreign currencies during the next 3 years and the use of $300 million worth of commodities for foreign relief.

These two laws, the Agricultural Act of 1954 and the Agricultural Trade Development and Assistance Act, are powerful weapons in our attack on the serious problem of farm commodity surpluses. They show the nationwide concern, as expressed in the Congress, over farm programs that kept piling up surpluses.

These laws permit the better adjustment of farm production to demand through flexible supports; and they encourage a reduction in the storage of surplus commodities to a manageable level. We are already negotiating with several nations to sell commodities for local currency and as of December 31 had signed one $35,500,000 agreement.[1]

Many other legislative actions taken in the 83d Congress will aid the farmer and help stabilize the American farm economy. Some of these actions directly involve the Department; others do not, but have long-range implications for American agriculture.

Increased funds were made available and are being used to expand soil conservation programs. The Watershed Protection and Flood Prevention Act and amendments to the Water Facilities Act permit broader farm participation in these programs. Amendments to the Farm Tenant Act have made more loans available to farmers. The increase in the borrowing authority of the CCC from $6.75 billion to $10 billion enables us to make more effective use of price support mechanisms.

Of great long-range importance to American farmers are the new tax law, the approval of the St. Lawrence Seaway, and the extension of social security coverage. Farmers received a general reduction in their taxes, the right to charge off certain soil conservation practices not previously deductible and to depreciate over a 5-year period the cost of grain storage facilities and farm equipment. Eventually, the Seaway project will mean lower costs to farmers for power and transportation. Most farmers and farm workers who have been helping pay the costs of social security, but have not been protected, are now given this protection.

These measures concerning American agriculture are detailed, far-reaching, and of great implication for American farmers. They put new and serious responsibilities on the Department. We were proud to cooperate with the Congress in making our recommendations; we are now bending every effort to carry out our responsibilities in the spirit with which this truly impressive legislative record was made.

We began the reorganization of the Department in 1953. In my last report I detailed the changes we had made. I pointed out that we had rearranged the Department's administrative machinery into four major categories—Federal-States Relations, Marketing and Foreign Agriculture, Agricultural Stabilization, and Agricultural Credit. Last year we completed most of these changes and made the necessary adjustments with no loss of effectiveness.

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[1] As of March 31, 1955, agreements had been signed with five countries for the sale of $145,000,000 worth of commodities.

We had several reasons for undertaking this reorganization. We wanted to strengthen the areas of the Department concerned with research, education, price stabilization, marketing, and production adjustment. We wanted to give better service to the farmer through decentralization of many functions. And we wanted to give the States more responsibility in some areas. In general, our purposes have been realized: The reorganization brought improved service and more efficient operation.

The activities of the Department in 1954 are described in detail in the body of this report. There is no need for a lengthy description here. However, I should like briefly to touch on some of the important actions that were taken:

In the 12-month period, January through December 1954, commitments were made under our disposal programs to move price support commodities valued at almost $1.4 billion into consumer channels. These commodities include 210 million bushels of wheat, 205 million bushels of corn, 883 million pounds of cottonseed oil, and almost 1.6 billion pounds of dairy products.

We stressed marketing campaigns in cooperation with industry groups. The success of the dairy and beef campaigns shows what results marketing action can produce.

Our technicians met regularly with the employees of the Atomic Energy Commission in order to keep informed about the latest developments in research on the production of electricity with fissionable materials. This use of atomic energy has awesome meaning for farm areas that need cheap sources of power and new irrigated lands.

Early in 1954 we were directed to give special attention to the problems of small farmers in the Nation. We have completed an intensive study on this subject. It is evident that low-income farm families will need help in improving their resources, their financial condition, and the education of their children.

In the current fiscal year, the Department is spending about $20 million more for research and educational work than the $94 million appropriated in fiscal 1954. At the same time, we are emphasizing the need to take research to the field faster and more effectively.

We have extended aid, under Congressional mandate, to various areas of the Nation that were hit last year by severe drought and heat.

These measures and actions on what one might call the Washington side of the agricultural picture, the Federal legislative and administrative side, are vital. By far the most important developments in American agriculture, however, are taking place on the farms of the Nation where the individual farmer applies his skill and strength to the task of producing the food and fiber for all the people. It is on the farm that American agriculture succeeds or fails.

Our farmers increasingly have to feed more people with fewer rural workers. In about half a century we have become a Nation of city dwellers. In 1900 almost 31 million people in a population of 76 million lived on farms, that is 4 out of 10. Today less than 22 million people in a population of 164 million, 1 out of 7, live on farms.

Today we have about 8.5 million farm workers. Each of them produces enough food and fiber to meet his own needs and the needs of 18 additional persons. We all share in the benefits that these workers, using modern techniques, machinery, and products, have created.

We may be reasonably certain that the decline in the number of persons living and working on farms will continue. It follows that our farmers will be asked to produce an ever-increasing amount of food and fiber for our growing city population. There may be 200 million Americans by 1970, and our farm population is likely to fall to 20 million by then.

This growth pattern of the Nation should assure a bright future for the American farmer. During the next 15 years, we have to increase our total agricultural output by one-fourth to provide each new citizen the same kind and amount of food the average person has available today. This increased production will have to come from about the same acreage in cultivation today.

In this long-range effort to increase production on the land that is now cultivated, individual farmers will have to take the lead. They will have to make the decisions, adopt the techniques, and do the work. Government can and will play a part by assisting and advising farmers. But the individual farmer should be left free to decide what is best for himself, his farm, and his family.

We look to our farmers for the long-range increased production of food and fiber on which we will base our economic, military, and ultimately, our political strength. America's strength is important not only to us but also to the whole free world. For in the long peacetime era that we hope lies ahead, God willing, America's strength and the leadership that depends on it will largely determine the fate of free men and will shore up the hopes of those who want to be free.

THE 1954 RECORD

Production, Yields, and Acreage

Despite drought in a large area of the country and acreage restrictions on several crops, total agricultural production in 1954 was equal to the largest on record, that of 1953. With improvement in some major crops balancing declines in others, the index of all-crop production was equal to the 1947–49 average. This was about 3 percent less than in 1953 and 6 percent less than the all-time high of 1948. Output of livestock and livestock products was at a record high level in 1954, 4 percent above 1953.

Record crops of soybeans, rice, sugar beets, and oranges were harvested, with oats, sorghum grain, and barley near-record. Other crops that exceeded their average outturn were rye, flaxseed, cotton, all hay, dry beans, tobacco, sugarcane, commercial vegetables, and cranberries. A few crops were near average—corn, apples, pears, and cherries. A little farther down the scale were winter wheat, potatoes, hops, grapes, and peaches. Only a few crops fell sharply below average: Spring wheat, dry peas, peanuts, sweetpotatoes, broomcorn, apricots, and pecans.

Production of feed grains was estimated at about 122 million tons, up 3 percent from 1953. Corn production was 7 percent less, but output of oats, barley, and sorghum grain ranged from 25 to 90 percent more

than in 1953. The estimated outturn of food grains was down 14 percent from 1953—all spring wheat being 38 percent less, and all wheat 17 percent less than 1953. Rice production, however, was up 12 percent.

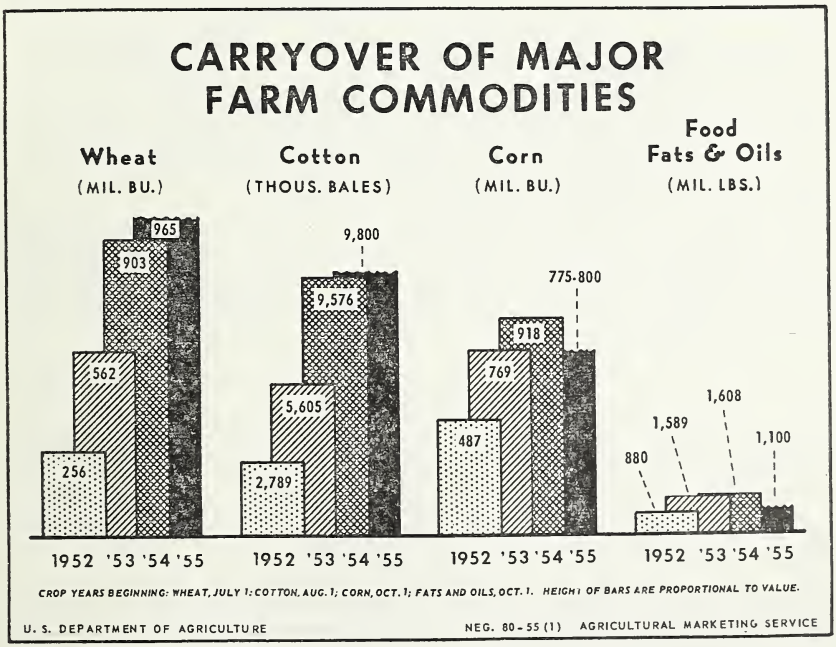
Wheat

Total wheat supplies for the marketing year, which began July 1, were estimated (in November) at about 1,870 million bushels. This consisted of the carryover July 1, 1954, of 903 million bushels, the 1954 crop estimated at 970 million bushels, and imports around 5 million bushels, mostly feeding quality wheat from Canada. This total supply was almost 8 percent above the previous high point of 1,736 million bushels in 1953–54.

Approval of marketing quotas by wheat farmers in a national referendum on July 23 is expected to result in a 12 percent reduction in acreage seeded for harvest as grain for the 1955 crop. Assuming that plantings approximate the national allotment of 55 million acres, and assuming yield per seeded acre at the 1943–52 average, a crop of about 850 million bushels would then be produced in 1955. The national average support level for wheat in 1954 was $2.24 a bushel. In 1955 it will be not less than $2.06 a bushel, 82.5 percent of the August parity price.

Corn and Other Feeds

A record supply of feed grains and other concentrates is available for the 1954–55 feeding season, 10 percent above the 1947–51 average, and 5 percent above 1953–54. The corn supply of about 3,884 million



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bushels is a little below 1953–54 but above the 1947–51 average. Because of the searing droughts in many areas, the 1954 crop dropped to 2,965 million bushels and is expected to fall somewhat below requirements. The carryover on October 1, 1955, should be lower than the record level of 918 million bushels on October 1, 1954. Supplies of oats, barley, and sorghum grains, however, are all much larger than they were in 1953–54, and larger carryover stocks of these grains are to be expected in 1955.

Cotton

Cotton acreage was reduced in 1954 and the crop was estimated in December at about 13.6 million bales, compared with 16.5 million bales in 1953. With a carryover of 9.6 million bales the supply for the current marketing year totals about 23.3 million bales. As some increase in domestic use and larger exports are in prospect for the 1954–55 marketing year, carryover stocks may be increased only slightly during the current marketing year. On October 14 we announced 1955 marketing quotas of 10 million bales for upland cotton and 30,000 bales for extra-long-staple cotton, minimum quotas permitted by law for 1955. In September we announced an initial set-aside of 1 million bales of upland cotton, and this will be increased to at least 3 million bales. This quantity will be excluded from the supply in computing price support level.

Food Fats

Output of food fats and oils in 1954 was larger than in 1953. There was a record crop of soybeans—343 million bushels. Flaxseed production was also up 13 percent over 1953, but cottonseed and peanuts were down.

Livestock and Livestock Products

Beef production was about 4 percent larger in 1954 than in 1953, and is likely to continue large in 1955. Hog slaughter rose in response to a 13 percent increase in the spring pig crop. The fall pig crop in 1954 was about a sixth larger than in 1953. Total production of meat in 1955 probably will be larger than the 1954 output.

Estimated milk flow in 1954 reached 123.8 billion pounds, compared with the previous record of 121.2 billion in 1953. Present prospects indicate that milk output in 1955 may be about equal to 1954. Production of poultry products in 1954 ran above that of 1953 and probably will continue large in 1955.

Food Consumption

Total domestic food utilization in 1954 was 43 percent larger than in 1935–39.

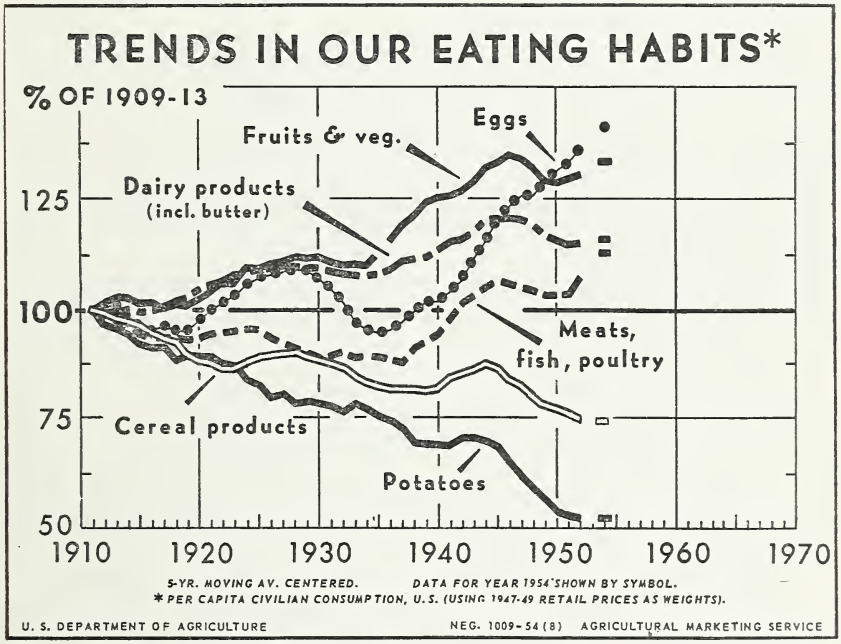
Per capita civilian consumption of food in 1954 was 13 percent larger than in 1935–39, 3 percent larger than in 1947–49, and 1 percent above 1953. It fell below the record year of 1946 by only 1 percent.

Our people ate more beef, eggs and chickens per person than ever before. The per capita meat consumption of 154 pounds in 1954, the same as in 1953, was close to a record, being exceeded only in the period

1905–08. Total meat consumption in 1954 exceeded that of any previous year—about 24,800,000,000 pounds, compared with 24,312,000,000 in 1953, the next highest year. Per capita consumption of turkeys in 1954 equaled the 1952 record. During the year, butter consumption recovered somewhat from the low record per capita consumption in 1952 and 1953.

The average per capita supply of proteins in 1954 was about 7 percent larger than in the years just before World War II, a trend that is associated with increases in consumption of livestock products. It more than offsets a downward trend in the consumption of cereal products that also marks the present period.

The shift from cereals to livestock products is due both to changes in consumers' food habits and to a rise in levels of living. It has meant greater demands upon farm resources. It takes more acreage and more effort to produce meat and poultry products than to produce an equal amount of calories and other nutrients in the form of such commodities as wheat and potatoes.



The per capita consumption of all foods combined has risen slightly in each of the past 3 years. Record or near-record rates of consumption for meats, chicken, turkey, eggs, processed fruits and vegetables have brought about the increase in the over-all index. Meanwhile, the long-time down trends in the per capita consumption of potatoes and cereal products have apparently slowed down.

The Balance Sheet

The financial position of farmers in the United States continued good during 1954 despite moderate income reductions. The equities of farmers and other owners of farm property increased, because of

larger asset values, from about $142.7 billion to about $145.1 billion in 1954. Farmers' holdings of deposits, currency, United States savings bonds and investments in cooperatives also increased slightly. Total farm debt was approximately the same at the end as at the beginning of 1954—slightly more than $17 billion. Farm mortgage debt rose slightly during the year, but non-real-estate loans declined. Farmers reduced purchases of machinery and equipment in 1954 and they placed a smaller volume of commodities under price support loans than in 1953. Farmers in drought areas and other farmers who had difficulty in obtaining production credit from usual sources were assisted with emergency loans.

Farmers' cash receipts in 1954 fell a little below those of 1953. Total cash receipts were estimated at around $30.0 billion, 5 percent less than the year before. Marketings continued close to the high levels of 1953, but prices were moderately lower. It appeared that receipts from livestock might drop about 3 percent, due primarily to lower prices for dairy and poultry products. Receipts from crops in 1954 were expected to total 6 percent less than in 1953, largely because of smaller marketings of cotton.

Farm production expenses declined slightly from 1953 to 1954 and may ease further in the coming year. Expenditures for hired labor, operation of motor vehicles, seed, ginning costs, containers, insecticides, and some other operating expenses were lower in 1954, partly because of smaller production of cotton and wheat and reduced farm operations in the drought areas. Purchases of fertilizer and feed and charges for maintenance and depreciation showed little change from 1953. But taxes, mortgage interest, and livestock purchases were larger.

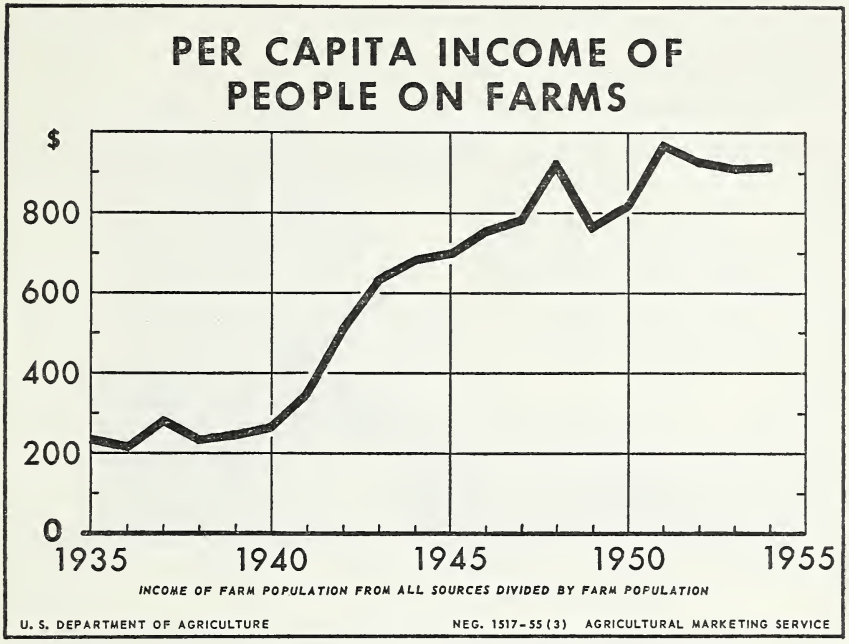
Realized net income of farm operators in 1954 totaled $12.0 billion, 10 percent below a year earlier. The reduction, however, was only one percent when adjusted for inventory changes. Per capita income from farm sources alone increased from $645 in 1953 to $658 in 1954.

Declining farm income in 1953 and 1954 reduced farm purchases and investment outlays in 1954. Rural sales of general merchandise in 1953 were slightly higher than in 1952, but in the first half of 1954 they dropped about 8 percent below the same period in 1953. Sales by farm implement dealers, which also include products other than farm equipment, fell about a tenth from 1952 to 1953 and in the first half of 1954 were more than one-tenth below 1953.

Farm investment outlays for new construction in 1953 totaled 9 percent below 1952; in 1954 they were about a tenth below 1953. Sales of tractors and farm equipment were down about a tenth from 1952 to 1953 and declined more rapidly during the first half of 1954.

Agricultural Employment

The total number of persons working on farms, January–November 1954, averaged about 8,649,000, compared with 8,779,000 for the same period in 1953 and 9,685,000 for the 1948–52 average. About 1 person out of 4 so employed was a hired worker, the others being farm operators and unpaid members of farm families. The average hourly wage for farm labor without room and board was 75 cents in October 1954, compared with 77 cents a year earlier.



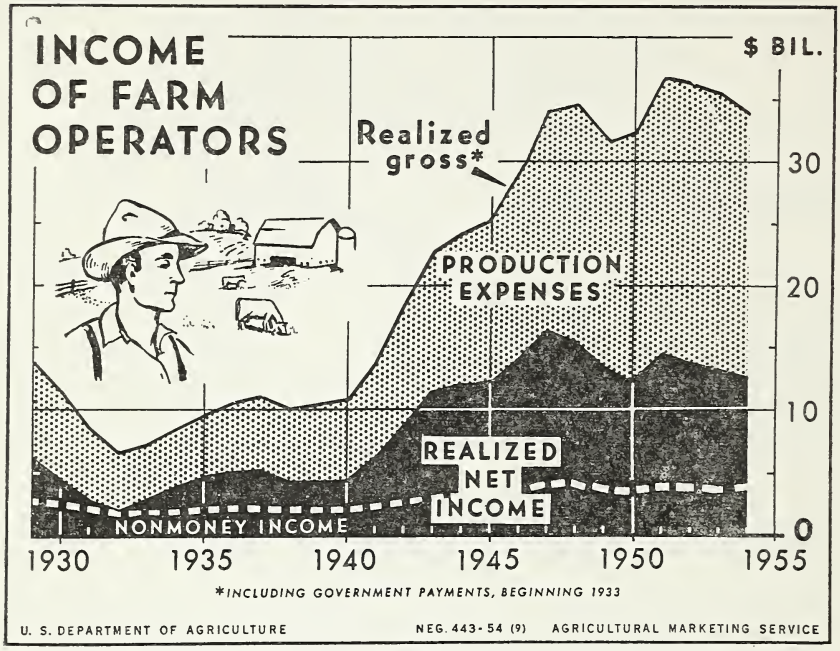
Per capita income of farm people has been trending upward, with few interruptions, during the past two decades. Even though net realized farm income for the United States declined between 1953 and 1954, per capita income of farm people from all sources rose from $914 to $918. Per capita income from farm sources alone increased from $645 to $658 from 1953 to 1954. Through the years, farmers have been improving their economic position by increased efficiency and larger marketings.

FEDERAL-STATES RELATIONS

This major category consists of six Services whose programs are often carried out in cooperation with the personnel of the States: The Agricultural Research Service—production and utilization research and disease and pest control associated with it. The Federal Extension Service—education for the farm family. The Farmer Cooperative Service—analysis and aid for farmer cooperatives. The Agricultural Conservation Program Service—on-the-farm soil and water conservation. The Soil Conservation Service—soil and water conservation and flood prevention. The Forest Service—forest conservation and research and the promotion of good forest use.

Agricultural Research Service

The knowledge that research produces is a stabilizing force in American agriculture, pointing the way with assurance and giving farmers added confidence in the plans and decisions they have to make. In 1954 the scientists of the Department of Agriculture, working in cooperation with their colleagues in the land-grant colleges, continued to make an impressive record in the fields of both basic and applied research.



From its 1947 peak of 16.8 billion dollars, farm operators' realized net income dropped steadily to a postwar low of 12.4 billion dollars in 1950. Half of this loss was regained in 1951, when realized net income rose to 14.5 billion dollars, but further declines in 1952, 1953, and 1954 have cancelled the 1951 gain.

Realized gross farm income in 1954 is estimated to be about 5 percent lower than in 1953. With production expenses reduced only 1 percent, however, realized net income is down substantially from the 1953 total of 13.3 billion dollars.

The value of research to the American farmer has been demonstrated many times. When World War II began, for example, the requirements of national defense called for sharp increases in farm production. The wide use of the knowledge acquired by research helped make this achievement possible. In the postwar era, many farmers have had to make difficult adjustments. When they have had adequate scientific knowledge to draw upon, they have usually been able to make these adjustments more easily.

In the years ahead there will be continuing adjustments in our agriculture, and many of them will be of major importance. Here again the information obtained through scientific investigation and the widespread use of this information on farms will be of primary importance to progress in agriculture.

Although there is a time lag in applying the results of research on the farm—a lag which must be shortened—the backlog of unused information is much smaller today than it was in the early 1940's. In other words, research information is being used faster than new information is being developed.

Several important actions taken during the year to strengthen agricultural research and educational programs should help correct this condition. The reorganization of the Department of Agriculture

made it possible to realine research and the related service and regulative functions in order to make all these operations more responsive to changing needs. The new organization now enables us to make a coordinated research effort in solving some of the major problems of production and utilization that farmers face.

The Department also made a detailed appraisal of methods to strengthen agriculture by means of these research and educational activities. In this work, we are emphasizing reduced production costs, an increase of productivity per unit, the improvement of quality, new uses for farm products, and the expansion of markets. Good research programs require a certain amount of anticipation of the kind of decisions farmers will have to make so as to obtain in advance the kind of information they will need. A proper state of readiness in research will ultimately mean less violent adjustments in agriculture.

Today's farmers are engaged in agriculture not only for this year but for the future. The large amount of capital many of them have invested in power, machinery, supplies, and facilities will not permit them to make too many management errors and survive, much less prosper. Farmers, therefore, need all the aid scientific research can provide in adjusting their production of crops and livestock to the demands of the market and in making their operations still more efficient.

During the next 10 to 20 years the increasing population of the United States will require greater unit productivity on the available agricultural lands. Also, the increasing number of older people in the population will change market prospects for a number of farm commodities because of different dietary needs. These facts point to changes in crop patterns and farming operations.

By and large, these trends should in time reduce or eliminate most agricultural surpluses. They may, in fact, create some shortages, unless the knowledge acquired through research advances rapidly enough to make possible more efficient production.

Much remains to be done to reduce waste and losses in agriculture. Results of a survey released last June show that losses from insects, diseases, weeds, and improper storage or handling have averaged about $13 billion annually in the United States in recent years. This figure is almost one-third the potential farm production of the Nation.[2]

The wider use of the technical knowledge that we have will help reduce these losses, but even so, we must obtain much more of it if substantial progress is to be made. Much of this knowledge will be obtained by applied research, the type that is directed toward a specific problem.

In 1954 the research services of the Department in cooperation with the land-grand colleges and other State and private organizations brought about numerous advances in both applied and basic research.

Limited research on vesicular diseases of animals was begun at the Animal Disease Laboratory on Plum Island, N. Y. We hope that at

[2] Eliminating these losses, however, would not have meant $13 billion more income. Larger production would tend to lower prices.

this isolated, super-safety laboratory, we will find the necessary knowledge to increase the protection of animals against foot and mouth disease.

At Brownsville, Tex., a new center for research on the pink bollworm was opened. This marks the beginning of an all-out fight against what is potentially the most destructive cotton insect. The Brownsville laboratory is a good example of cooperative action by private citizens, industry, State and Federal agencies, and a foreign government, in this case the Government of Mexico.

In 1954 we also saw the completion of several studies showing how farmers can get better results at less cost. A 3-year study of dairy farms indicates that high-quality milk can be produced at less than half the labor and investment that is normally used. Good sanitation and cooling methods and convenient, low-cost housing for cows helped bring down the costs. Another study shows that improved fertilizing and other cultural practices can cut the cost of producing a bushel of wheat, corn, or oats. In this particular study, scientists spent more money per acre for improved practices, but the high yields that resulted more than offset the extra expense.

Plant breeders in 1954 announced the discovery of a number of superior varieties: for example, a new firm-fleshed peach, a disease-resistant, nonshattering soybean, a new wheat grass with exceptional vigor, and several varieties of disease-resistant potatoes.

Basic research last year pointed to the increasing use of antibiotics in combating plant diseases. In several experiments, the development of soft rot in spinach was delayed several days by dipping the plants in streptomycin. Streptomycin sprays on pear trees controlled fire blight about as well as the standard copper sulfate spray and did not russet the fruit as copper sulfate does. Terramycin injected into the trunks of Japanese plum trees and peach trees seemed to retard bacterial spot defoliation.

In 1954 agricultural researchers discovered new ways to fight the insects that destroy crops. Chemical extenders—resinlike materials called chlorinated terphenyls—proved efficient in prolonging the effectiveness of insect killers like DDT, aldrin, and lindane. Sugar mixed with an organic insecticide such as malathion or diazinon proved an effective control of flies that were resistant to DDT. This method of control is also much cheaper than residual insecticide spraying. Researchers in the past year also successfully used phosphorus insecticide injections for the first time to control grubs in cattle. This experiment is not completed, and the researchers are now studying the effects of the phosphate on the cattle; they hope the insecticides will disappear rapidly from the animals, as they do from plants.

These examples of agricultural research give some idea of the extraordinary amount and variety of work going on in laboratories and experiment stations to increase efficiency, reduce costs, and originate new products and ideas for the benefit of all the people.

The programs to combat plant and cattle diseases and harmful insects in which the Department, the States, and private groups participated last year show the practical application of research findings. In 1954 the animal disease eradication programs of the Department were concerned primarily with combating brucellosis and tuberculosis in cattle, vesicular exanthema in swine, and scrapie and blue tongue in

sheep. We also continued our cooperation with the Mexican Government to eradicate foot and mouth disease in that country.

The brucellosis eradication program, which is a cooperative State-Federal activity, includes the testing of cattle, the removal of reactors, and the vaccination of calves. Almost two-thirds of the reactor-cattle were shipped for immediate slaughter, compared with less than one-half in the previous year.

The incidence of bovine tuberculosis among the more than 10 million cattle tested in 1954 remained the same as that of the 2 previous years—.11 percent. This year's program placed primary emphasis on tracing the origin of infections that had been detected by an inspection of the meat after slaughter. Nearly 15 percent of all reacting cattle were located by this method.

The sheep disease, scrapie, appeared in two new States, Connecticut and Oregon, in 1954, and the total is now seven States since the disease was discovered in this country in 1947. Since this disease could cause serious economic losses in the sheep regions of the Nation, the Department, in cooperation with interested groups, has developed a vigorous program to control it. At the close of 1954, all known infection had been eradicated.

In combating plant diseases and insects, the Department draws heavily on research. For example, grasshopper outbreaks covered nine Western States and were made worse by drought in the Southwest. Cooperating with State and local authorities, we used airplanes and ground equipment to spray the insect killer, aldrin, over 726,000 acres of infested land. It is estimated that efforts to combat grasshoppers last year saved several million dollars worth of crops.

In Michigan there was an infestation of gypsy moths over a 10,000-acre area near East Lansing. The Department cooperated with the State in a program to spray the area with DDT, a method that has been successful in other areas.

Nearly 12 million barberry bushes, which play host to the stem rust disease that infects small grains, were destroyed in 18 cooperating States.

The fumigation of fruit and nut trees in California that are infested with Hall scale is nearly 60 percent completed; if there are no new infestations, this project should be completed early in 1956.

Thus, we have applied research information during the past year to wage war on the diseases and insects that attack the crops and the livestock of American farmers. In spite of the amount of work that Federal, State, and private scientists are doing, there are so many areas like these in which we require research information, and so many places we can apply it, that our science is always running behind needs.

We must push ahead to develop better varieties of crops, better breeds of livestock, and better methods of using the land. We need to move forward in reducing the losses due to insects and disease. We must have more information on balanced production and on economic and efficient marketing. We need to develop new products made from agricultural raw material, new uses for existing products, and new processes to expand markets.

The state of American agriculture decades from now will depend in great part on the kind of research effort we put forth now and in the immediate future.

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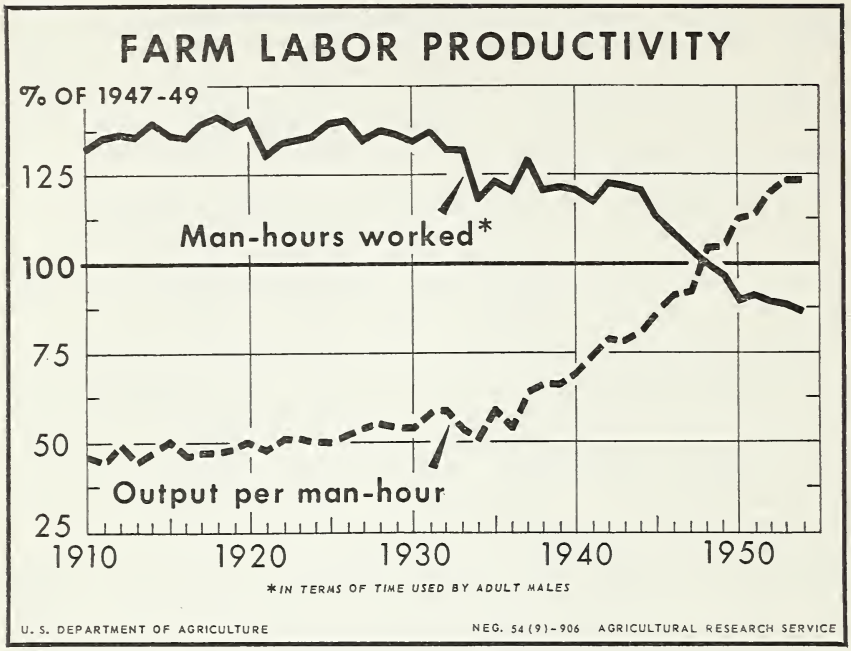


Even though farm labor input has been cut materially, particularly in the last decade, farm output has continued to increase. Greater production with fewer workers means that farm output per man-hour is now almost twice as great as the pre-World War II average and over a fifth higher than in 1947–49. Advances in farm mechanization are largely responsible for the cut in hours of farm work. Higher crop yields, more livestock on farms, and greater livestock production also have contributed to increasing labor productivity.

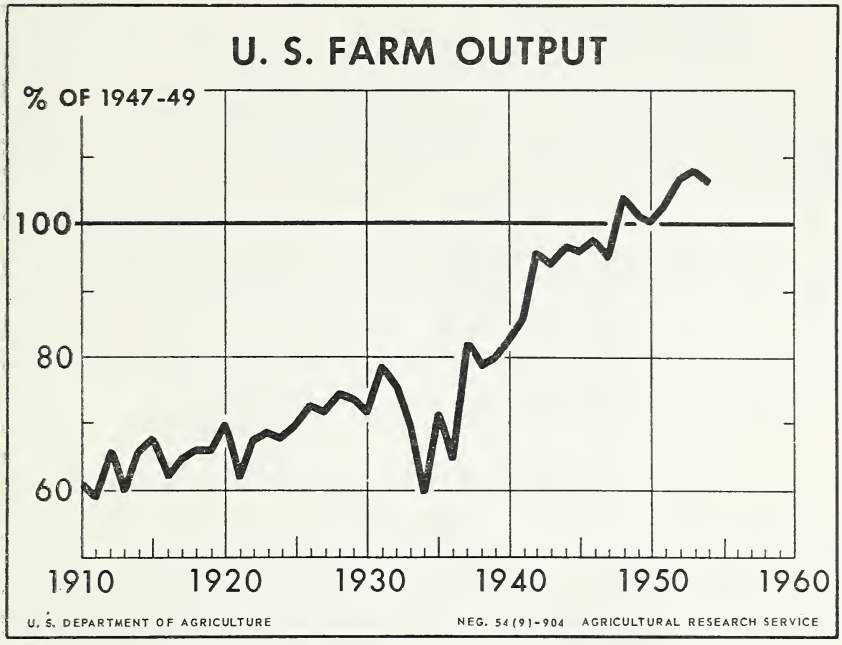
Federal Extension Service

As the educational arm of the Department of Agriculture, the basic job of the Cooperative Agricultural Extension Service is to speed up the use of agricultural and home economics research information on each farm. Extension made notable progress in gaining this objective in 1954.

The emphasis was put on the unit or whole-farm approach to the problems of farm families. This approach provides more intensive counseling for them so that they can deal with their problems as a whole instead of on a piecemeal basis. Through this method, extension workers are better able to help farm families recognize and analyze their problems and opportunities, plan a sound system of farming, put their plans into operation, and adjust them wisely as needed.

A greater effort along these lines was made possible by increases in both Federal and local government appropriations for extension work, which provided for the employment of some 1,000 new county and home agents.

This increased emphasis on the farm-unit method of doing extension work resulted from the needs of farm families and was in response to their requests. Faced with high capital requirements, production controls on certain crops, and a tight cost-price squeeze, farm



During the inter-war years, farm output for human use increased at an average rate of about one percent per year, about the same as the increase in population. During the war, the annual rate of increase in farm output jumped to 3 percent, a greater increase than was made in population. Since World War II the annual increase of both has been about the same. But output remains above peacetime requirements. The increase in farm output has been the result of an upward trend in both livestock and crops, with a downward trend in feed used by horses and mules.

families have to produce efficiently to stay in business. The most efficient producers are usually those who make the fullest use of all their resources, fitting them into a sound system of farming that is based on knowledge of research and economic trends, available markets and credit, and the supply of capital and labor.

The unit approach is just one of the many methods used by the Extension Service in working with farm families. Extension continued to give educational assistance to thousands of farm families through demonstrations, tours, meetings, and other time-tested methods. Extension will continue to rely heavily on these methods of working with farm families.

There has seldom been a greater need for Extension assistance than in the past year. Problems brought on by drought, the leveling off of the inflation cycle, and smaller foreign markets had to be met on many farms. Extension responded by helping 8⅓ million families in one phase or another of its work with adults and youth. This was 24 percent more than in the year before. Nearly half these families were farm families. Increased extension aid to rural nonfarm and urban families accounted for the rest.

County extension agents, cooperatively employed by the Department, State land-grant colleges, and county governments, assisted 5½

million families to change one or more farm practices and a like number to change one or more home practices. To accomplish this, they made more than 3½ million farm and home visits and increased their use of demonstrations, meetings, tours, and other methods of reaching people in large numbers. Local leaders whom they had trained held meetings attended by more than 18 million people; at these meetings the local leaders passed on to others what they themselves had learned through extension.

Major attention was given in 1954 to helping farm families make needed production and marketing adjustments. Anticipating another severe drought, many agents started intensive educational programs on the value of supplementary feed and forage early in the year. As a result, probably more grass and small grains went into grass silage last spring than ever before. When severe drought and heat struck in midsummer, agents concentrated on explaining emergency measures and programs that would cushion the damage.

The need to make the best use of land taken out of surplus crop production was equally pressing in 1954. Extension agents in Tulare County, Calif., for example, aided farmers in diverting to other uses 70,000 acres that in former years had been planted in cotton. The agents prepared in ready form all the available information on alternative crop and livestock production adapted to the county and presented it through meetings, personal visits, county publications, the press and radio. This pattern was repeated in hundreds of other areas where production adjustments had to be made.

Constantly on the alert for situations that could lead to emergencies, the Extension Service tries to avert these difficulties by foresight and prompt action. The grain storage problem was critical in 1954. Extension took the lead in developing and carrying out educational programs to increase storage space for grain, centering its efforts on explaining to farmers, grain elevator operators, and others the problem of too little storage and the fact that Government aid was available for expanding storage space. Results in Oklahoma alone are sufficient to point up the success of this work. At the beginning of the 1954 harvest, Oklahoma had storage space for 41½ million more bushels of grain than in the previous year.

The increased emphasis on the farm-unit approach to farm and home problems makes the 4-H and home demonstration club programs more important than ever as instruments for helping farm families. Work with both groups was directed toward this end in 1954. Enrollment in 4-H clubs reached a record high of 2,058,144 during the year, and membership in home demonstration clubs rose to 1½ million.

Since marketing costs now take more than 55 percent of the consumer's food dollar, there is a real need for more marketing work with producers, handlers, and consumers. Extension made notable progress in its work with these groups during the year. For instance, in 37 Texas counties where agents worked with all segments of the poultry industry on a quality egg program, 20 million dozen eggs were purchased from producers on a graded basis for 5 cents a dozen above the going market price. Producers, handlers, and consumers benefited from the increased quality of the product that was marketed.

Extension also has the difficult problems of helping farm families adjust their production to present market needs as well as seeking new

market outlets. To this end, county agents worked with more than 6,000 cooperatives, including 2 million members, and assisted 18,000 retailers with merchandising programs. Organized marketing improvement work was carried on in 2,000 counties.

Educational work was conducted with handlers and processors in labor saving, packaging, and displays that will increase both marketing efficiency and consumer demand. During the year, extension workers assisted 4 million consumers with marketing information. Extension marketing projects were carried out in 42 States and Alaska and Puerto Rico.

Our most important extension work, however, is centered on the farmer and the homemaker. We have found that it is most efficient and produces the best results when the farm-unit approach is used—when there is an attempt to help individual farm families with all their interlocking problems. This approach, however, is not the most inexpensive in time, money, or personnel. It demands close attention by the county agent and continuing work with individual families.

Farmer Cooperative Service

The Farmer Cooperative Service in 1954 continued to help farmers with the problems involved in the operation of their cooperatives—an advisory program that was started in the USDA over 40 years ago. Particular emphasis was placed on how cooperatives could help farmers make adjustments to changing economic conditions, increase the efficiency of their marketing and purchasing associations, and improve the quality of their products, supplies, and services.

The FCS was officially established on December 4, 1953, although it continued with the same staff and the same general approach that it had followed as the cooperative Research and Service Division of the Farm Credit Administration. Two developments brought about the change in status—enactment of the Farm Credit Act of 1953, which made the Farm Credit Administration an independent agency, and the reorganization of the Department of Agriculture on November 2, 1953.

To help the 3 million farmers who market produce and obtain farm supplies and services through the 10,000 or more farmer cooperatives in this Nation, the Farmer Cooperative Service in 1954 conducted about 100 projects. Two-thirds of these projects were supported by funds appropriated for work with farmer cooperatives and the remainder by funds provided for marketing research under the Agricultural Marketing Act of 1946.

Research studies were generally national or regional in scope, and in many of the studies the Service collaborated with land-grant colleges. The Service also conducted a few studies of selected cooperatives to obtain basic information to be used in providing advisory services to cooperatives that had similiar problems and in preparing educational material for general use.

The Service worked with 1,500 farmers' associations and took part in some 250 educational or business meetings, workshops, and clinics

attended by about 15,000 persons connected with cooperatives or concerned with them as extension workers, teachers, and citizens interested in the subject.

During the 9-month period ending September 30, 1954, the Service issued 16 publications and 24 other reports. It also cooperated in the preparation of four publications released by land-grant colleges. A recent survey by a consultant of the American Institute of Cooperation showed that nearly every land-grant college was using the publications of the Service in their courses in the field of agricultural cooperation.

Working closely with the Foreign Agricultural Service during fiscal year 1954, the FCS helped 263 foreign visitors from 42 countries who came to the United States under the technical assistance program of the Foreign Operations Administration. The Service assisted these visitors by helping to determine their primary interest in agricultural cooperation, by planning visits to cooperatives, and by explaining the cooperative activity in this country.

Agricultural Conservation Program Service

Through the 1954 Agricultural Conservation Program, the Federal Government shared with individual farmers and ranchers the cost of carrying out approved soil and water conserving practices on about 2 million farms and ranches. This program is a part of the total conservation effort of the Department of Agriculture, which includes research, education, technical assistance, as well as credit and cost-sharing.

In developing the 1954 program, we made a concerted effort to obtain recommendations from local farmers and ranchers. Representatives of the Extension Service, the Forest Service, the Farmers Home Administration, the Soil Conservation Service, and officials of Soil Conservation Districts and others working with State and county Agricultural Stabilization and Conservation committees cooperated in making recommendations and later in developing county programs. The ASC committees, with the cooperation of these agencies, administered the program in the field. In addition, the Soil Conservation Service and the Forest Service were responsible for providing technical services for the program in their respective fields.

The objective of cost-sharing under the 1954 program can be summed up in two words: more conservation. Cost-sharing made possible more soil and water conservation measures than farmers could be expected to carry out using solely their own resources. Cost-sharing was made available to farmers and ranchers only when they invested their own funds, time, and machinery to carry out needed conservation measures. In general, the farmers' efforts accounted for considerably more than half the cost of these measures.

The cost-sharing program of ACP in 1954 emphasized a complete conservation job or "package practice" approach. Usually a number of steps are necessary in accomplishing the total conservation job. For instance, where permanent sod is needed to keep soil from blowing or washing away, seed, lime, and fertilizers, as well as a preparation of the land, are generally necessary. Cost-sharing was offered on the basis of a completed job instead of for a part of it.

In 1954 when a farmer requested cost-sharing—and no cost-sharing was provided unless it was requested—a definite amount of assistance was planned for the conservation work approved. Therefore, the farmer had a definite commitment from ACP to help him in carrying out needed conservation work, rather than a promise of help if and when the funds were available.

In the main, cost-sharing under the 1954 program was for the initial establishment of needed conservation practices. It is expected that cost-sharing will not be approved for these same practices on the same land in succeeding years.

Provision was made under the 1954 conservation program for counties to develop practices to meet such emergency conditions as drought, wind, erosion, and floods.

Pooling agreements were also used in some of the States to meet the needs of the community. Under such projects a number of farmers cooperated to carry out conservation measures affecting them as a group. These cooperative projects first had to be approved by ASC committees before they were eligible for cost-sharing, and the completed project had to meet program requirements.

Complete data are not yet available on the amount of conservation work carried out under the 1954 program. However, the following summary of the 1953 record indicates the kind and quantity of accomplishments under ACP.

A total of 4,645,000 acres of pasture and range land were given added protection against erosion by seeding to grasses and legumes.

A total of 62,000 dams and ponds were built to store irrigation water and prevent erosion and to allow for a better distribution of livestock and improved management of ranges and pastures.

Thirty-two thousand miles of standard terraces were constructed.

Contour and cross-slope farming were used on 1,300,000 acres of row crops and 593,000 acres of close-sown crops. Contour strip-cropping was carried out on 155,000 acres.

As a further means of controlling erosion due to wind and water, 80,000 acres of trees were planted for forest and windbreak protection.

In the sections of the Nation where irrigation is essential to the production of crops, 314,000 acres of land were leveled in order to obtain greater efficiency in the use of water to prevent erosion.

As an essential step in conditioning land to the growing of protective crops of grasses and legumes, 15 million tons of lime, 2.2 million tons of 20 percent phosphate, and 454,000 tons of 50 percent potash were applied.

In addition to the regular ACP programs, there were also carried on in 1954 the 1953 farm land restoration program, emergency wind erosion control practices, and special provisions for drought-damaged areas. The 1953 farmland restoration program was inaugurated in 1952 to rehabilitate farmland located largely in the Missouri-Mississippi valleys that suffered damage in the floods in 1952 and 1953. It was authorized by Public Laws 371, 82d Congress, and 207, 83d Congress. Work under this authority was completed in 1954. Additional funds of $15 million were appropriated by Public Law 357, 83d Congress, for wind erosion control practices in certain areas of the southern plains. This work was carried on in Colorado, Nebraska,

Kansas, Texas, Oklahoma, and New Mexico in 1954. The 1954 and 1955 regular ACP programs were modified and made available in the summer and fall of 1954 to meet emergency needs for vegetative cover and forage in areas damaged by drought.

Soil Conservation Service

On June 30, 1954, there were 2,618 soil conservation districts in the States, the territories, Puerto Rico, and the insular areas of the United States. These districts covered about 89 percent of all farms and ranches. The Department of Agriculture and the Soil Conservation Service were cooperating by request with 2,581 of these districts and were planning to give technical or other aid to the rest as rapidly as requests were submitted and facilities would permit.

About 189,000 farmers and ranchers became cooperators with their local soil conservation districts during the year, bringing the total number of district cooperators to about 1,454,000. Most of these farmers and ranchers received technical or other aid from the Soil Conservation Service during the year. The amount of soil conservation work by district cooperators in 1954 was 4 percent greater than in 1953. There was a large increase in the installation of floodwater retarding structures and in other off-site flood prevention measures under the supervision of the Service on watersheds approved for such operations. In addition, preliminary work plans were completed and watershed protection work was started on 59 small watershed demonstration areas in 34 States.

The "progressive planning" procedure, which the Service began in 1951, has brought about much of the accelerated progress of the past 2 years. Closer cooperation between the Soil Conservation Service, the Agricultural Conservation Program Service, and soil conservation districts has also been a factor. For example, about 779,000 ACP participants received one or more types of technical aid from SCS technicians during the year. About 50 percent of these ACP participants were already soil conservation district cooperators, and another 10 percent became district cooperators during the year. Another reason for the more rapid progress in soil conservation has been the increased interest in upstream watershed treatment for flood prevention and other conservation purposes.

Further progress was made in 1954 in coordinating conservation work among the various agencies of the Department of Agriculture, other Government Departments, and State agencies. This was particularly evident in the relations between the Service and the land-grant colleges. Technical work conferences conducted in many States were attended by personnel from the Service, the land-grant colleges, and other agencies. These workshops were effective in bringing problems before the cooperating groups, in developing a better understanding of actions taken, and in bringing about agreement on technical recommendations. The Soil Conservation Service and the Extension Services of several States conducted trial programs in order to broaden the scope of farm and ranch plans to include more emphasis on aspects of farm management.

The reorganization of the Department abolished the regional offices of the Soil Conservation Service. The State offices were given greater responsibilities, and some of the functions of the regional offices were transferred to Washington. Although this reorganization brought about some temporary disruption in administration, it was completed with a minimum of disturbance in operations.

Forest Service

Our forests are among the basic natural resources that are indispensable to the Nation's security and welfare. They are among the resources essential for a growing population and an expanding economy.

The Department's concern about the Nation's forests has been a major factor in giving impetus to the conservation movement in the United States for three-quarters of a century. Our basic objective for forestry continues to be the highest possible productivity of forest land, not only in commodities but also in public services and benefits. This objective applies both to the forest lands under public ownership and those privately owned. As basic policy, the Department wants to continue sound development of the national forests and also to aid in and encourage the development of State and private forestry.

In line with this basic policy, we carried out during the past year some reorganization and clarification of the Department's forestry activities and responsibilities.

My order of November 2, 1953, reorganizing the Department, assigned to the Forest Service the research and control work on forest insects and diseases previously conducted by the Agricultural Research Administration and also the management of lands formerly administered by the Soil Conservation Service under Title III of the Bankhead-Jones Farm Tenant Act.

These changes were carried out with a minimum of disturbance. Field programs of the transferred units were integrated with other activities of the Forest Service, resulting in improvements in supervision, coordination, and economy of operation.

In the interest of efficient administration and economy, a number of consolidations of national forests were made during the year. Several consolidations of ranger districts within national forests also were made and there were consolidations of units in two regional offices.

As of June 30, 1954, the net area of national forests and other lands under the administration of the Forest Service was 181,108,264 acres. This does not include some 7,000,000 acres administered under the Jones-Bankhead Farm Tenant Act. The net area administered on June 30, 1954, was 327,604 acres less than that administered on June 30, 1953.

There is a need in many of the forests for exchange of lands to consolidate public and adjacent private holdings and thereby to aid in more efficient management. We will continue to make adjustments of this kind. Also, the Department is looking to the disposal of certain areas now needed for urban development by expanding communities. While we believe that the present total area of the national forests

should not be substantially increased, we also feel that the basic structure of the national forests should be maintained. Any adjustments in area of these lands or in policy with respect to them should be based on considerations of the public interest.

In fiscal 1954, the cut of timber in the national forests totaled 5,365,113,000 board feet, a new record high, for which the Federal Government received $65,407,000. This compares with 5,160,355,000 board feet in the previous fiscal year.

The yearly cut has been increased by nearly 2 billion board feet in the past 5 years. It can be further increased; the allowable annual cut under sustained yield for the national forests, excluding Alaska, is estimated at 6.9 billion board feet.

Further increases to the full allowable cut will depend in large part on access to stands that cannot now be reached. A 5-year program of road construction is under way. The roads built under this program will make possible the harvesting of much mature timber that would otherwise be lost through fire, insects, and disease.

In timber sales in the national forests of the Pacific Northwest, the northern Rocky Mountain region, and the Southern States, we are stressing salvage logging and logging of insect-infested trees to control bark beetles.

The first pulp mill in Alaska began operation in 1954. The wood supply for this mill will come from a 50-year sale of timber from the Tongass National Forest. One condition of the sale was that the timber receive primary manufacture in Alaska, in line with the policy of the Forest Service to encourage industrial development in the Territory. A preliminary award has been made for another long-term sale in Alaska. Under terms of this sale, the purchaser will build an integrated plant, including both a sawmill and a pulp mill.

On national forest ranges, 1,108,040 cattle and horses and 2,964,102 sheep were grazed under paid permit. In addition, 4 million calves and lambs under 6 months of age were grazed without charge. Also free use was permitted, mainly for domestic purposes, for 47,931 cattle and horses and 4,458 sheep. Receipts from grazing fees were $3,107,172.

Range improvements made during the year included approximately 350 miles of fence, 10 miles of driveways, and 300 water developments. Reseeding was completed on 41,491 acres, bringing the total area reseeded to date to about 550,000 acres.

The Forest Service fought 11,962 fires in the national forests during fiscal year 1954. About 280,604 acres were burned, including 49,290 acres of private lands within and adjacent to the national forests.

Recreation is now one of the major industries of the Nation, and the resources of the national forests play an important part in it. The use of the national forests for recreation continues to increase. There were 35 million recreational visits in 1953, a 7-percent increase over the preceding year and a 97-percent increase over 1946. At the recreation areas in the national forests every attempt is made to provide sanitation for the protection of public health and safety, fire prevention, and safeguards against stream and water pollution. Because of inadequate facilities, however, many recreation areas in the national forests are overcrowded, and this results in serious hazards to the public and to the forest resources.

We are continuing to expand our cooperative work with the States for the management of the wildlife resources of the national forests. New cooperative agreements were made during the year with State fish and game departments in Texas, Virginia, and Arizona.

So that national forest lands may be as useful as possible, the Forest Service permits special use of them by other Government agencies and private groups when it can be made without interfering with the objective of managing them for the greatest public good. Over 51,000 special-use permits covering some 2,400,000 acres are in force. These permits authorize such uses as telephone lines, airports, summer homes, pastures, schools, and radio and TV sites. Approximately 1,500,000 acres of lands under Forest Service jurisdiction are leased for the production of minerals. The Service charges appropriate fees for the use of these lands, and receipts were over $1,200,000 in fiscal year 1954.

As of June 30, 1954, the Forest Service was administering 79 separate project areas, a total of about 7,050,000 acres of land, under provisions of Title III of the Bankhead-Jones Farm Tenant Act. The Service was managing about 2 million acres directly; the remaining 5 million acres were under short-term lease to local agencies, and the Service provided technical assistance. The sale of certain areas suitable for farming, as authorized by the Agricultural Appropriations Act, was in preparation.

The Forest Service was also responsible for about 746,000 acres of land in 63 land utilization projects under long-term lease by non-Federal public agencies. We have offered these areas for transfer to the lessee agencies, and it is expected that title to a large part of them will be transferred to these agencies during fiscal year 1955.

Most of the 7,050,000 acres of Bankhead-Jones lands managed by the Service are used primarily for grazing or are planned for restoration to grazing use. During the year, 23,301 acres of range and pasture land were reseeded, 269 miles of fencing were completed, 142 stock-water sources were developed, and 36 miles of roads and trails were constructed on these lands. Special efforts were made to correct the damage suffered by improvement projects, grass and seedings, and established grass areas in land utilization projects within the dust bowl areas of Kansas, Colorado, Oklahoma, Texas, and New Mexico. The damage was caused largely by wind-blown material from adjoining privately owned, cultivated lands.

It is the Department's policy to promote and encourage local effort wherever possible for the protection and sound management of forest lands. To this end, we are cooperating with the States in several forestry programs.

During the past year, the Department cooperated with 43 States, Hawaii, and Puerto Rico in the production and distribution of trees to farmers and other landowners. Under this program, the 1954 distribution reached a new record of an estimated 500 million trees. Seed sowing in the nurseries of the States for this program in 1955, moreover, points to further gains in the number of trees that will be distributed. One State had 125 million plants in its nurseries for distribution in 1955—a quantity greater than the distribution by all the States combined in 1950.

Under provisions of the Clarke-McNary Law of 1924, the Department cooperates with 43 States and the Territory of Hawaii to provide organized protection against fires for State and private lands. We extended cooperative protection during the year to over 5 million additional acres, bringing the total area covered by this protection to 373,826,000 acres. However, some 53,000,000 acres of State and private forest and watershed land still remain without organized protection against fires.

Under provisions of the Cooperative Forest Management Act of 1950, the Department cooperated with the States to provide technical assistance to woodland owners and to processors of primary forest products. Thirty-nine States took part in this program, which makes available the services of foresters to aid owners of woodlands and operators of small sawmills and other wood processing plants with the problems of forest management and timber processing.

In cooperation with 25 States and with counties, townships, protective associations, lumber industries, and woodland owners, the Department conducted a program of control work against the white pine blister rust. The blister rust control area comprises 23,402,000 acres. The disease has now been controlled on 71 percent of the designated control area on State and private lands, 67 percent on national forest lands, and 65 percent on Interior Department lands.

Participation by the Forest Service in the flood prevention activities of the Department of Agriculture included work on a number of survey reports on flood prevention and improvement work on authorized projects.

The Service took part in the preparation of plans for 42 of the small watershed projects designated under the Hope-Anderson watershed demonstration program and began improvement work in 22 of these watersheds. As authorized by the 1944 Flood Control Act, flood prevention works of improvement were continued in certain watersheds in California, Mississippi, Virginia, and West Virginia.

In the interest of better balance and greater efficiency in the forest research program, the Rocky Mountain and the Southwestern Forest and Range Experiment Stations were combined in one enlarged Rocky Mountain Station. Also the Intermountain and Northern Rocky Mountain Stations were combined in an enlarged Intermountain Forest and Range Experiment Station.

The following are a few of the more important results obtained through the research for which the Service is responsible:

A study of the yield of spruce and fir in the Northeastern United States has provided tables of growth and yield for use in the management and regulation of these forests. An improvement in naval stores practice, developed in Florida, resulted in a saving of $4,125 per crop of 10,000 turpentine trees. An experimental watershed in central Utah that had long been overgrazed was rehabilitated by plowing, contour trenching, and seeding. Measurements in California on steep slopes showed that a large amount of soil movement occurs as sliding during dry weather and pointed to the need for better vegetative cover.

Methods were developed for reducing the impact of drought on livestock operations in desert-grassland ranges of Arizona. Reliable information on managing grazing on seeded range is being developed in Utah. In California and Idaho, we are developing successful

methods for reseeding browse on big game ranges. Studies in the longleaf pine forests of the South are showing how to integrate grazing with timber production for maximum income.

The effectiveness of concentrated lead arsenate sprays to control the white pine weevil was confirmed. Radioisotopes were used effectively to study the flight habits of the Englemann spruce beetles in Colorado.

A study of decay in timber following injury in logging operations was completed in the Pacific Northwest. A method was developed for reducing wood decay by soil cover under houses without basements. Waterborne wood-preserving chemicals reduced deck decay on aircraft carriers.

In research on forest products, the use of chemically treated wood for shell patterns and die models was shown to be superior to normal wood. An acceptable newsprint paper was made from cottonwood and from a mixture of cottonwood and willow. Data were gathered that would facilitate the design of structures to better withstand earthquakes or hurricanes.

In 1954 further progress was made on the nationwide forest survey to determine the character and condition of the forest land, detailed information about the timber on it and its cutting, and about the requirements for timber products. This survey covered 43 million acres in 7 States and a resurvey of 27 million acres in 10 States.

These are but a few of the many, many research activities—in laboratories, on forest ranges, and in industries—that the Forest Service carried out in 1954.

The year 1955 marks the 50th anniversary of the establishment of the Service. Progress in forestry in the United States during these 50 years has been very great. The Forest Service hopes that the observance of its Golden Anniversary will be an occasion for reviewing the accomplishments not of the Service alone but also of the forestry agencies in the States, the forestry schools, the forest industries, the conservation organizations, and all others who have contributed to the notable advances made in forestry in the past 50 years.

Civil Defense Activities

Protecting our crops, livestock, and forests from destructive insects, diseases, and fire is an every day job, in peace or in war. The job becomes acute, however, in times of war, when the possibility arises that a desperate enemy might seek to destroy these sources of our strength through biological and incendiary warfare. The Department of Agriculture has been given the responsibility of developing ways and means of combating such attacks on these resources. It is also our responsibility to plan for emergency food needs.

In September 1954, the Federal Civil Defense Administration delegated to the Department the responsibility for work leading to the protection of farm animals and plants from open or hidden attacks through the medium of virulent diseases or injurious insects. In carrying out this assignment, the Department is cooperating with State governments to the extent that available funds will permit in the development of (1) information and instructional materials on rare plant and animal diseases and insects of foreign origin for

the use of State and Federal technicians working in the field, and (2) plans for an emergency program to handle such an attack if one is made. In cooperation with other Federal agencies and with foreign governments, we are conducting some initial research to find the most effective ways of combating this kind of warfare.

In 1951, a national committee, headed by the Forest Service of the Department and made up also of representatives of the Department of the Interior and of the States, prepared plans to counter an enemy fire attack against our wild lands. In August 1954, an Executive Order made the Department of Agriculture responsible for planning the wartime protection of these lands. It is expected that the national committee will revise the plans made in 1951. In an emergency, the forest fire protection organizations of the Federal Government and the States will use these plans in taking action.

The Civil Defense Administration also delegated responsibility to the Department for planning a national food program that will meet the emergency needs of our people in case of enemy attack. We are carrying forward this planning.

MARKETING AND FOREIGN AGRICULTURE

This major category consists of two Services and one Agency that deal with the marketing of American farm products at home and abroad: The Agricultural Marketing Service—marketing research, information, and regulation. The Commodity Exchange Authority—maintenance of fair practices and competitive pricing in futures trading. The Foreign Agricultural Service—agricultural trade and relationships with foreign areas.

Agricultural Marketing Service

During the past years the services of the Department of Agriculture to help farmers market efficiently have been made more nearly equal to its services to help farmers produce efficiently. This is a major result of the reorganization of the Department.

In the past, the marketing activities of the Department were distributed among several separate agencies. The integration of many domestic marketing activities into one agency—the Agricultural Marketing Service—is making it easier to help strengthen the private marketing system for farm products.

The Service is tying together such familiar activities as marketing research, situation and outlook studies, market news, crop and livestock reporting, food distribution, grading and inspection, and the administration of marketing agreements and orders as well as the administration of various regulatory acts.

The Department put greater reliance in 1954 on measures to increase consumption of farm products. To illustrate, we worked with various commodity groups in major campaigns to increase consumption of dairy products and of beef, vegetables, and other products. The joining together of two great food industries—meat and vege-

tables—in cooperation with the Department for a vigorous merchandising campaign was a particularly striking development.

The National School Lunch Program was expanded further, and lunches were served to over 10 million children. This program is helping to improve the health of our children from the abundance of our farms, and it is strengthening future markets for farm products by building good habits of diet.

The Special School Milk Program, begun during the 1955 fiscal year under a Congressional authorization of $50 million a year for 2 years, should have similiar beneficial results. The consumption of milk by school children in some of the first communities to participate in the program has increased remarkably.

More than 600 million pounds of surplus foods were moved into consumption during fiscal 1954 through donations by the Department to States or to private welfare agencies operating in foreign countries. About 418 million pounds were distributed to 12 million people in the United States— to more than 9 million school children, over 1 million inmates of charitable institutions and hospitals, and over 1 million people in needy families. As of December 31, 1954, about 2,620,000 needy persons living outside institutions in 33 States and Alaska had been certified by States to receive commodities.

Since Department inventories of a number of surplus commodities still remain large, the amount of commodities donated during fiscal 1955 will exceed the amount donated in 1954. Local governments are tending to increase their distribution of commodities to needy families. Also, new legislation permitting the Department to pay the costs of packaging and inland transportation for commodities to be donated to needy people in foreign countries is expected to result in substantial increases in the amount of commodities disposed through this outlet in 1955.

The transition from scarcity to abundance of several farm commodities during the 1954 fiscal year brought increased emphasis on marketing research. We stressed research to improve the efficiency of marketing operations from the farm gate through the retail store to the consumer and to maintain and improve the quality of products. The following are a few of the many research results that can be translated into net gains for agricultural producers.

A new electronic device accurately detects and rejects eggs containing bacterial infection. This device is far more effective than hand candling methods in identifying eggs that have poor keeping quality.

Tests on quality and manufacturing performance showed the possibility of expanding the market for lower grades of cotton by increasing its use in the manufacture of fancy denims, cotton blankets, and tufting yarns.

The information and statistics on marketing that the Service developed helped to promote a better understanding of the costs of marketing farm products. Of special significance were reports bringing together information on current developments and trends in marketing margins for several food groups. An analysis of factors affecting the outlook for marketing charges and costs and the farmers' share of the consumers' dollar helped producers in planning their operations.

Shipping tests with California tomatoes verified the schedule of protective services that had been developed through previous tests to provide moderate temperatures that are favorable for ripening but do not cause injury from chilling.

Significant advances were made in research to find ways of protecting products from insect damage during marketing. A 5-year test was completed in studies on the protection of woolens. As a result, cloth for army uniforms was protected by DDT treatment. Multiwalled paper flour bags treated with an insecticide have prevented infestation in flour for 12 to 19 months.

Studies were made of women's preferences for fiber in clothing and household textile items, men's preferences for fibers, and preferences for fabrics in the automobile industry, the canvas and awning industry, and in the manufacture of wire and cable. The information developed by these studies will aid laboratory research men and processors.

Market development research on dairy products was conducted in cooperation with the American Dairy Association. One study tried to pinpoint areas in which the consumption of milk and dairy products might be increased. Another reviewed the availability of milk to the consumer, including the effect of milk-vending machines on sales to consumers. Increased milk sales accompanied certain changes in merchandising practices that resulted from an analysis of the sale and use of milk products in a southern city.

The emphasis of this Administration on self-help in agriculture gives a new importance to the continuing, year-round appraisal of the demand, supply, price, and income outlook for agriculture and its products. At the Washington level, work in this field is carried on cooperatively by the Extension Service, the Agricultural Marketing Service, and the Agricultural Research Service. In the States, the main responsibility for outlook information rests with the State extension service. Information made available by economists and marketing specialists in the Department is localized by the extension services, with the help of the agricultural experiment stations, in the various land-grant colleges. Extension agents assist in interpreting the information so that individual farmers can use it in planning their operations during the coming year. During 1954 the Agricultural Marketing Service released 90 issues of Situation and Outlook reports, which helped farmers adjust their production to meet market demands.

Together with outlook information, the AMS developed and published data on production and consumption of farm products in the United States. The following are some examples:

Data on the consumption of food were revised and the index of per capita food consumption was shifted to a postwar base. Estimates of demand for food in 1975 were made so that they could be compared with potential supplies. This information is useful in analyzing the long-term outlook for agricultural prices and farm incomes.

Work was expanded in collecting and publicizing more timely information on the production of crops and livestock and on prices paid and received by farmers. This information helps farmers in

deciding what to produce and when and where to sell it. A combined project of sampling and crop estimating in 10 Southern States for the 1954 crop season was begun as a first step to an improved statistical system. Studies under this project are framed in the form of an operating program so that they can be expanded and adapted to regular operations.

About 3 years ago an experimental quarterly cattle-on-feed report in Illinois, Iowa, and Nebraska was started. This report, which provides cattle feeders with timely facts for adjusting their feeding operations and marketing plans, has proved so valuable that we are expanding it to 11 additional States. After this expansion, the report will cover about 90 percent of the cattle feeding done in the United States.

A special program of county estimates and other data was prepared and the information furnished in connection with the acreage allotment programs.

With the addition of Georgia and Arkansas, there are now 32 States for which information on milk production estimates is published monthly.

These are just a few examples of the mass of data on production and marketing that the Agricultural Marketing Service gathers and publishes.

Greater emphasis is being placed on market news services, since reliable market information is essential to those who produce, buy, or sell agricultural commodities. The market news service, which now provides day-to-day reports on supply, demand, and pricing conditions at primary and terminal markets, assists farmers in obtaining equitable returns for their products. During 1954, market information on nearly 100 commodities was collected at year-round and seasonal offices in more than 100 cities and towns and was disseminated by all means of communication. More than 1,200 daily newspapers, nearly 1,300 radio and 82 television stations carried market news based on this information.

Besides its work in research, gathering and disseminating information and food distribution, the AMS also administers marketing agreements, gives freight rate services, and administers regulatory acts.

A total of 53 milk markets are regulated by marketing agreements and orders covering an annual production of about 27 billion pounds of milk delivered by 187,000 producers. During 1954, there were 28 marketing agreement and order programs in 21 States covering various fruits, vegetables, and tree nuts.

The Department's participation in cases before the Interstate Commerce Commission and other regulatory bodies and its informal negotiations with carriers helped to obtain and maintain equitable transportation rates and service on farm products and supplies. During fiscal 1954, we took part in 72 formal litigation actions before the ICC and other regulatory bodies and entered into 37 informal negotiations with carriers and their associations.

The regulatory acts administered by the AMS are designed to insure fairness in the marketing and distribution of agricultural products. They may be divided into three types of activity: The regulation of the business practices of dealers who handle the farmer's products in

the market place; administration of inspection laws that provide for the setting of standards or require their use in interstate commerce; and the administration of certain statutory provisions for truth-in-labeling.

Under the Perishable Agricultural Commodities Act, nearly 20,000 licenses were in effect, a slight increase over the previous year. Under the Federal Seed Act, 1,699 cases were investigated for improper labeling and advertising, an increase of 20 percent over the previous year, and 30 percent more investigations were completed in 1954 than in 1953. Convictions were obtained in 25 criminal cases based on an investigation made last year of weighing frauds at a major terminal stockyard.

We are making special efforts to improve the administration of these and other regulatory acts.

Commodity Exchange Authority

Opportunities to effect economy in agricultural marketing and distribution, by means of price-basing and "hedging" in the futures markets, were fostered during the year by effective enforcement of the Commodity Exchange Act. The purpose of this act, which is administered by the Commodity Exchange Authority, is to maintain fair practices and competitive pricing in futures trading—important to farmers because futures prices are used as a base in determining "cash" or "spot" prices of grains, cotton, and other major commodities.

To safeguard competition in price-making and prevent price manipulation and other unlawful trading practices, the CEA maintained surveillance of the market operations of large speculators and other traders on the leading futures exchanges—at Chicago, Minneapolis, Kansas City, New York, New Orleans, and Memphis. Forty-five special investigations of trading, and more than 600 audits of the books and records of commodity brokers and brokerage firms, were made during the year.

Enforcement was particularly effective in dealing with attempts to manipulate prices and to corner markets. In two major manipulation cases, the charges against the corporations involved were presented both in administrative proceedings of the Department and before United States district courts. The decisions in both cases supported the Government's charges, and appropriate sanctions were imposed.

Volume of trading continued at relatively high levels during the year in wheat, soybeans, soybean oil, soybean meal, eggs, and potatoes. For all regulated commodities the estimated value of trading was $42.1 billion in fiscal 1954, compared with $45.6 billion in the previous year. Notwithstanding decreased speculative activity in some commodities, the trading volume in all major markets was adequate for hedging purposes. There were decreases in the volume of hedging in a number of commodities, including wheat, cotton, cottonseed oil, and wool tops, due in part to the effect of Government price support operations which tended to reduce price risks.

Foreign Agricultural Service

It is often pointed out that the domestic market is the big market for United States agriculture. For some farmers, however, the opportunity to sell a portion of their total production to foreign customers is also highly important. Since early in the Nation's history, farmers have produced significant quantities of grains, tobacco, and cotton for export, and in more recent times fruits, fats and oils, dairy products, and other commodities have been sent abroad. From 30 million to 50 million acres of United States cropland normally produce crops for export.

Since the new Administration took office, one of the Department's big assignments has been to rebuild weakened markets for farm exports. In 1950–51, following the outbreak of the war in Korea, heavy foreign buying sent agricultural exports to a record total value of about $4.1 billion. The next year, however, exports dropped 31 percent, to $2.8 billion. Part of the problem of excess stocks of agricultural commodities is due to this newly depressed export situation. We have taken aggressive action to improve it.

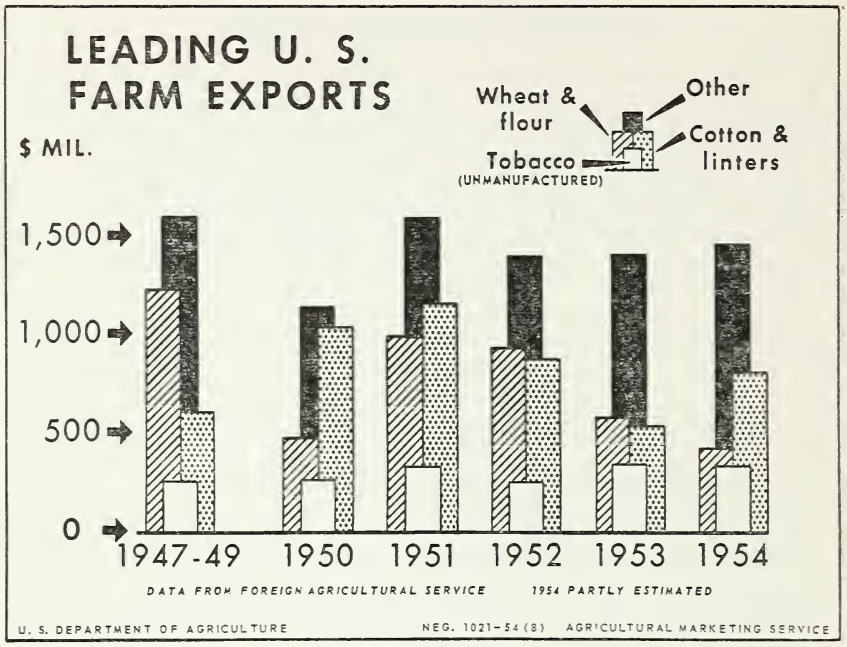
Our first action was to reestablish in 1953 the Foreign Agricultural Service, giving us an effective organization to strengthen our foreign markets. Such activity had been an important function of the Department before 1939. In that year, the Office of Foreign Agricultural Relations was established to serve principally as a study and reporting office. The new Foreign Agricultural Service, which replaces it, is, by contrast, an action agency with the basic responsibility of assisting United States exporters of agricultural products to sell their products abroad.

With the new Foreign Agricultural Service as a basis of operation, we endeavored this past year to take steps toward regaining, maintaining, and strengthening our foreign agricultural markets.

We assisted in the preparation of an export program under Public Law 480, 83d Congress, the Agricultural Trade Development and Assistance Act of 1954. The administration of Title I of this Act (the sale of $700 million worth of surplus commodities for foreign currencies) is one of the main activities of the Foreign Agricultural Service.

On September 1, 1954, the United States agricultural attachés, who had first been established in the Department by Congress in 1930 and had been transferred to the Department of State by Executive Order in 1939, were returned to the jurisdiction of the Department. The Department of Agriculture now has full-time, direct representation abroad and is able to report more effectively on foreign situations affecting American agriculture and to promote the foreign sales of American farm products.

We sent Agricultural Trade Missions to Europe, Asia, and Latin America for a first-hand inquiry into our opportunities for marketing United States farm products, as recommended in the President's 1954 agricultural message to the Congress. The members of the Missions, who were broadly representative of American agriculture, rendered an excellent service through their analysis of foreign marketing problems and opportunities. Their statesmanlike report on foreign



Foreign demand for farm products increased sharply from the Korean outbreak in mid-1950 to mid-1952. As war-scare demand subsided and world production of grains improved, exports of farm products dropped sharply beginning about mid-1952. The value of agricultural exports totaled 2.8 billion dollars in 1953 compared with 4 billion in 1951. Most of this decline was due to smaller foreign takings of wheat and cotton. Some pickup in total exports is indicated for 1954 due primarily to larger exports of cotton and most other products except wheat. Reduced imports from this country and continued foreign military spending by the U. S. have generally improved the dollar position of countries importing our farm products. In addition new programs have been developed to expand foreign markets for agricultural products.

marketing has proved to be a useful, continuing guide to both industry and Government.

We sent an increased number of commodity specialists abroad for on-the-spot study and development of marketing opportunities. In many instances, their reports have been of material assistance to United States traders doing business abroad.

We continued to build our day-to-day contacts with the United States agricultural trade and to improve our release of information on foreign agricultural production and marketing.

Working closely with the United States agricultural trade in stressing the need for quality, service, and salesmanship that are essential in meeting competition, we set our sights on helping American agriculture achieve a more favorable competitive position in its world marketing. At the same time, we administered import control programs that gave foreign exporters a fair share of our domestic agricultural market but prevented them from taking unfair advantage of and damaging our own price support program.

We participated in various programs that encouraged the export of our surplus agricultural stocks. This activity included assistance to the Foreign Operations Administration in administering Section 550 of the Mutual Security Act of 1953. Under this provision, nearly $250 million worth of United States surplus farm commodities will move into export channels.

These and other activities of the Department to improve exports encourage us to believe that the tide has been turned and that American agricultural exports will continue to improve. In 1954 our agricultural exports climbed somewhat. All indications point to a continued increase in 1955, probably 10 percent or even more in the total of farm-product exports.

This constantly improving outlook is due in great part to two factors: (1) A refusal to accept the negative premise that American agriculture must be a bystander in the world market place, now that the emergency needs of the war and the postwar era have passed; (2) prompt and aggressive action in cooperation with the Congress and with agricultural leaders in establishing policies and programs that promise to give American agriculture a continuing strong position in serving and preserving its foreign markets in the future.

AGRICULTURAL STABILIZATION

This major category consists of one Service and two Corporations that administer the programs designed to maintain economic stability in American agriculture: The Commodity Stabilization Service—adjustment of production and marketing, price support, and commodity disposal. The Commodity Credit Corporation—finance and storage of price support commodities. The Federal Crop Insurance Corporation—insurance against crop disaster.

Commodity Stabilization Service

The Commodity Stabilization Service was created by the Departmental Reorganization Order of November 2, 1953. The Service is responsible for programs relating to (1) acreage allotments and farm marketing quotas; (2) price support; (3) storage facilities; (4) supply and foreign purchases; (5) administration of the Sugar Act; (6) administration of the International Wheat Agreement; (7) barter and other disposition of surplus farm products; (8) drought emergency feed operations; (9) assigned defense food activities; and (10) local administration of the agricultural conservation program.

Employees of the Service work closely with several other offices of the Department and with other agencies of the Federal Government. For example, Service personnel are used in the administration of the programs of the Commodity Credit Corporation. Under the defense food program, the Service works closely with the Office of Defense Transportation, the Department of Defense, and the Selective Service. It performs services relating to surplus removal and school lunch programs for the Agricultural Marketing Service.

In the field organization of the Commodity Stabilization Service, the State and county Agricultural Stabilization and Conservation Committees and CSS commodity offices are key units.

The programs of the Service in fiscal 1954 were carried out in an economic climate of heavy production, large supplies, and some weakening of prices. As prices declined, price support activity increased, especially in the case of wheat, cotton, corn, and dairy products.

Support extended on 1953 crops totaled $4,306,000,000, compared with $2,865,000,000 on 1952 production and $1,061,000,000 on commodities produced in 1951. The following commodities received the largest amount of price support: Wheat, 558 million bushels, $1,215,000,000; upland cotton, 6.8 million bales, $1,121,000,000; corn, 474 million bushels, $742,000,000; butter, 385 million pounds, $250,000,000; cheese, 456 million pounds, $174,000,000; dried milk, 674 million pounds, $106,000,000; and tobacco, 252 million pounds, $112,000,000. Rice, peanuts, wool, mohair, honey, tung nuts, barley, oats, rye, sorghums for grain, flaxseed, soybeans, dry edible beans, cottonseed, and crude pine gum also received price support during the year.

Loans outstanding at the end of the year approximated $2,337,000,000 compared with $1,138,000,000 on the same date a year earlier. The cost value of commodity inventories on June 30, 1954, was about $3,668,000,000, compared with $2,339,000,000 the preceding year. The price support investment of the CCC at the end of June 1954 (the dollar total of loans outstanding plus the value of inventories) was $6,006,000,000, compared with $3,476,000,000 a year earlier.

Net realized losses charged against the CCC's price support program totaled $419,477,000 during fiscal year 1954, compared with $61,146,000 the previous year.

Extremely large supplies of some of the basic farm crops made adjustment operations necessary. Marketing quotas were proclaimed for the 1954 crop of upland cotton and approved by producers, and a national acreage allotment of 17,910,448 acres was established. However, under Public Law 290, 83d Congress, the national allotment was increased to 21,379,358 acres. Neither acreage allotments nor marketing quotas were in effect for the 1953 crop.

With the total supply of wheat on July 1, 1953, exceeding the normal supply by 48 percent, wheat marketing quotas were proclaimed for the 1954 crop. The national acreage allotment was established at 62 million acres, 16.7 million acres below the 1953 planted acreage of 78.7 million acres. On June 21, 1954, a national marketing quota for the 1955 wheat crop was proclaimed and a national wheat acreage allotment of 55 million acres was announced for 1955.

As I indicated earlier in discussing the 1954 record, wheat growers, in a national referendum on July 23, approved the marketing quota for the 1955 crop. Neither acreage allotments nor marketing quotas were in effect for the 1953 crop.

As to adjustment operations for other basic crops, the 46,996,000 acreage allotment on corn was apportioned to the 834 counties in 22 States comprising the commercial corn producing area. Marketing quotas were not required on either the 1953 or the 1954 crops of rice. Tobacco marketing quotas were in effect for the 1953 crop of all kinds of United States tobacco except Pennsylvania cigar filler. Marketing

quotas for the 1954 crop were in effect for all kinds of tobacco except Maryland (type 32) and Pennsylvania filler (type 41). There was an acreage allotment of 1,585,222 acres on the 1954 crop, compared with 1,670,490 in 1953. For 1954 crop peanuts, the Department announced a national allotment of 1,610,000 acres and a marketing quota of 643,785 tons.

Under pressure of production-supply conditions, the Department also carried on a vigorous program to provide storage for the CCC-owned commodities acquired under the price support program and to aid farmers in improving their facilities for on-the-farm storage. During the fiscal year, the Commodity Stabilization Service purchased bins with total capacity of about 300 million bushels, an action which brought the total capacity of bins owned by the CCC to about 838 million bushels. Arrangements were made with the Maritime Administration to use 317 surplus ships, which provided about 72 million bushels of grain storage space. About 31 million bushels of grain storage space was constructed and made available under the "occupancy contract" program, and further space for 119 million bushels was under construction at the end of the fiscal year. CCC loans to farmers made possible the construction of storage space for a total of about 41 million bushels. Re-seal programs were formulated to offer 1-year extensions to farmers on 1953 crops of basic commodities under farm-storage loan or purchase agreements covering an eligible commodity in farm storage.

The heavy Government inventories of farm products are not only expensive to store but they also tend to depress prices of "free" supplies. Therefore the Service made a determined effort during the year to dispose of its holdings to the maximum extent permitted by price legislation, the need to maintain a reasonable level of reserves, and the existence of desirable domestic and foreign outlets.

The following are some of the special actions taken: We sold at market prices almost 170 million bushels of Government-owned corn from the 1948 and 1949 crops in danger of deterioration. This proved advantageous to livestock producers, dairymen, and poultrymen. The sale of about 570 million pounds of nonfat dry milk solids for use in animal and poultry feeds helped ease a shortage of high protein feeds. The CCC furnished feed concentrates at less than market cost to eligible farmers in disaster areas. This feed, which had a cost value to the CCC of $111 million, was sold to farmers for $70 million. School children and needy persons received large quantities of CCC-owned dairy products during the fiscal year. Eighty-two million pounds of butter, 36 million pounds of cheese, and 9 million pounds of nonfat dry milk solids were moved to these consumers. On November 19, 1953, the CSS announced that wheat would be sold for export on the basis of allowances announced each market day, the allowances in practice being identical with prices under the International Wheat Agreement. Through June 30, 1954, sales under the program totaled almost 49 million bushels. In short, commodities having a cost value to the Corporation of $1,424,000,000 were moved out of inventory during the fiscal year.

Operations Under International Wheat Agreement

Sales of wheat during the fifth year of the International Wheat Agreement (from August 1, 1953, to July 31, 1954) amounted to 106,153,000 bushels. The United States quota for the year was 193,652,000 bushels. Export payments, made to exporters on shipments under the Agreement, amounted to $51,389,000 on 108,923,000 bushels of wheat and flour. In addition, the CCC provided 10,102,000 bushels of wheat from its own stocks on which the differential payments totaled $4,504,000. The total cost of these payments was $55,893,000 on the 119,025,000 bushels, an average of 47 cents a bushel.

Several barter transactions were entered into under authority of the Commodity Credit Corporation Charter Act. We exchanged wheat, corn, and tobacco for strategic and other materials from foreign producers. The total exchange value was $29,437,000.

Sugar Program

On December 14, 1953, sugar requirements for 1954 were determined to be 8 million short tons, raw value, and on March 19, 1954, this figure was increased to 8.2 million tons.

Conditional payments of a little more than $66,500,000 were made on the 1953 crop to about 75,000 sugar beet and cane producers in 23 States, Hawaii, Puerto Rico, and the Virgin Islands. Sugar producers qualified for payments by meeting certain conditions pertaining to child labor, wage rates, proportionate shares, and, in the case of processor-producers, to fair prices. These conditions are set forth in the Sugar Act. Determinations of fair wage rates were made for each of the five domestic producing areas.

During the 1954 fiscal year, deficits of 180,000 tons from the beet sugar area and 100,000 tons from the Philippines were declared in 1953 quotas.

Federal Crop Insurance Corporation

In 1954 severe drought again struck the Nation, destroying crops over large areas. Thousands of farmers lost not only hope of profit, but even the money they had spent putting in and caring for their crops.

Although drought was the most dramatic and extensive destroyer of crops, insect and disease hazards also took heavy toll of crop investments. Bright prospects turned to failure for durum wheat farmers as black stem rust swept through promising fields to destroy much of the Nation's durum wheat crop. Such disasters showed again the value of a soundly conceived and operated crop insurance program. Indemnity checks received by farmers under the Federal All-Risk Crop Insurance Program helped carry them through the emergency.

Insurance did not, however, meet the needs of farmers in those counties of the Nation where it was not available or of those farmers who had insurance available but did not use it. Unfortunately some farmers who live in counties where they can get insurance do not take advantage of this business method of protecting themselves against crop loss.

The steady expansion throughout 1954 of counties and areas approved for various forms of emergency assistance emphasizes the importance of an expanding insurance protection program. Crop

insurance is the sound way of providing necessary assistance when crops are destroyed. Under the insurance program, the farmers themselves pay for all or a major part of this assistance.

Again in crop year 1954 as in 1953 the Federal Crop Insurance Corporation paid out more in indemnities than it received in premiums. Income in 1954 was down to $22.7 million, largely because of reduced acreage of insured crops under the allotment programs, and the Corporation paid out $28.6 million. In the previous year, the Corporation had an income of $27 million and paid out $31 million. With the limited scope of its operations and present concentration of business, it is to be expected that in years of very severe and widespread crop disasters the Corporation's premium income will not be sufficient to cover the losses paid. The income and payment experience of the past 2 years points to the need for an expansion of the insurance program to cover other crops and areas so that the operations of the Corporation will not be so directly affected by conditions in the major winter and spring wheat areas.

It is unfortunate, moreover, that the Corporation has been faced with two very severe drought years in 1953 and 1954, just when major improvements in its operation and administration were beginning. We have used these adversities, however, to analyze our insurance operation under conditions of severe loss and to study the changes necessary to put the operation of the Corporation on a sounder basis. The reorganization and reorientation necessary for a more business-like operation have been set in motion. Procedures are being simplified, and there is an increasing decentralization of authority to the field.

The losses of the past 2 years demonstrate that the present coverage and rates of the Corporation are more realistic than they were in the early years of nationwide crop insurance. It is also evident that the risk of loss should be spread widely over geographic areas and crops to correct the dangerous concentration that now exists.

AGRICULTURAL CREDIT

This major category consists of two agencies that make loans to individual farmers or to groups: The Farmers Home Administration—credit service to help farmers in times of natural disaster and for farm and home improvement and farming adjustments. The Rural Electrification Administration—credit and technical assistance for rural electric and telephone borrowers.

Rural Electrification Administration

An increase in rural electrification and telephone loan volume, a reduced backlog of loan applications, and a reduction in administrative expenses because of improved procedures were some of the features of the program of the Rural Electrification Administration during fiscal 1954.

Loans to electric and telephone borrowers during the year totaled $241 million the highest since 1951. Electrification loans for the year

reached $167 million, more money than was loaned in either of the two preceding fiscal years.

The REA made 325 loans to electric borrowers in 40 States and Alaska to make possible the extension of service to over 170,000 new consumers. These loans brought the cumulative net loan total for the electric program to $2,886 million of which $442 million had not yet been advanced and remained available to borrowers.

In the rural telephone program there were more loan allocations in the fiscal year 1954 than in any other year since the program was started in October 1949. The 1954 loan total of $74,712,000 was nearly double the $42,000,000 of the year before. REA telephone borrowers also completed more cutovers to modern dial service, built more miles of new line, and connected more subscribers than during the four previous years combined. REA has now allocated funds to 279 borrowers for the improvement and extension of telephone service in rural areas in 42 States.

A breakdown of the annual electric loan figures shows that about one-fourth of them were made for improvements in systems. This percentage will probably increase in the years ahead as more borrowers face the problem of meeting the growing power needs of their consumers.

Generation-transmission loans continued to be made at about the long-term rate. REA continues to apply the tests of need, feasibility, and lower cost of power supply to applications for this type loan.

Through efficient and business-like methods, the administrative expenses of the agency were reduced to the lowest point since 1947. One way this was accomplished was by extending the private engineering inspection and CPA audit programs to all electric borrowers. Another was by tightening up staffing and bringing about procedural money-saving improvements in administering the program.

Shortening the procedure for handling many electric loan applications helped reduce the backlog of applications for loans by more than $75 million, bringing the total down to $118 million. REA drew down $38 million of the $45 million reserve loan authorization available for fiscal year 1954 which Congress provided to take care of needs that could not otherwise be met under the State allotment formula.

Operating revenues of REA electric borrowers reached more than $1 million a day, a figure more than ten times as large as in 1941. Borrowers had made advance payments of $69 million. And as of June 30, 1954, only 23 borrowers were more than 30 days behind in their payments. Actual delinquency on electric loans reached the lowest point in several years, and a program was developed to find and correct conditions that might cause financial problems in the future. A survey and evaluation of each borrower's financial status enabled REA to give special attention to those whose earnings are inadequate to maintain a sound financial position unless management and operating improvements are made.

After a study, REA recommended that the 2 percent interest rate on its loans be retained.

Mindful of the rural people it serves, REA has promoted good working relations among all segments of the electric and telephone industries. For example, 1954 witnessed considerable progress in the

cooperative efforts of REA borrowers and the power companies to meet power needs through an integration of facilities. Perhaps the outstanding example of this was in Kentucky where an agreement was reached ending a dispute over power supply dating back to 1939. One effect of this agreement is that the electric cooperatives involved will have lower power costs and the assurance of future cooperation in meeting increased power requirements. A similar approach is being made in a power supply situation in Iowa. The objective at all times is the best electric service for the farmer at the lowest competitive cost.

To help improve the outlook for borrowers facing financial difficulties, REA has begun an active power use program. Here again the industry-wide approach has been applied. The electric cooperatives, the electrical equipment firms, and the power companies have been encouraged to take as much responsibility as possible. In this way, REA's cost will be small, and an even more effective program can be begun through the efforts of those groups who have most to gain by its success.

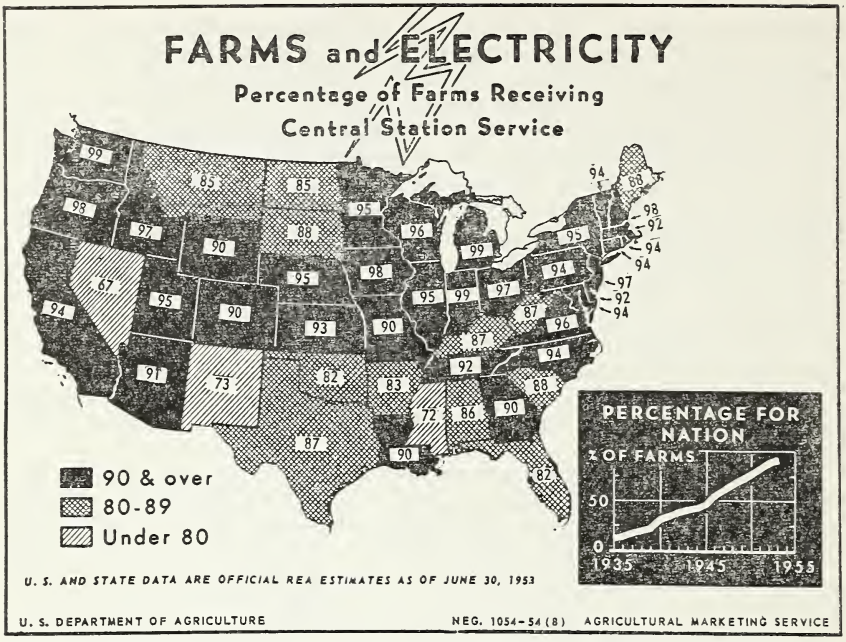
To help make the program a success, REA was instrumental in the formation of the Inter-Industry Farm Electric Utilization Council. With all segments of the electric industry represented on it, the Council is an instrument by which the entire industry can give a much needed rural service and at the same time stimulate business. Electricity has already played a vital role in building up the farm economy. Using more power efficiently will strengthen the economy of the entire country.

With the passage of the new Atomic Energy Act, REA prepared to keep pace with research work relating to the production of electric power with fissionable material. The 83d Congress made funds available to REA to give appropriate attention to the possibility of utilization of atomic energy for electric power generation in rural areas. Certain REA employees meet regularly with technicians of the Commission to keep informed of the latest developments in research on the production of electric power in this manner. The task of applying thermonuclear fission to the production of economical electric power is a tremendous one with many problems.

The activities of the REA last year and in the more distant past have helped produce truly startling results on American farms. The percentage of farms electrified as of June 30, 1954, had risen to 92.3. This compares with 90.8 percent on June 30, 1953, and 77.2 percent at the time of the 1950 census. As of June 30, 1954, 416,000 farms had no central station electric service. This figure indicates that 4,966,000 of our farms were receiving central station electric service, an increase of 77,000 during the fiscal year. On July 1, 1954, 44.3 percent of American farms had telephones. This is the highest percentage on record; it compares with 42.5 percent the previous year and 38.2 percent in April 1950.

Farmers Home Administration

Farmers Home Administration lending operations reached an all-time high in fiscal 1954. Loans made and insured by the agency totaled $292,455,800, an increase of about 28 percent over the $228,-



The continuing expansion of electric lines to connect unserved farms raised the percentage of farms receiving central station electric service to almost 93 percent by June 30, 1954. Still lagging behind the rest of the Nation in percentage of farms electrified are the sparsely populated areas of the West and most areas of the South.

Along with the increasing percentage of farms electrified has been a constantly increasing use of electricity on electrified farms. The annual use of electricity on the average electrified farm has virtually trebled since 1940.

701,000 advanced in fiscal 1953. The 1953 total had been the largest amount loaned in any one year by the Farmers Home Administration or its predecessor agencies.

Approximately 131,000 farm families received loans from the agency during fiscal 1954 compared with about 108,000 in fiscal 1953. Including farmers who already had loans, some 243,000 families worked their farms during 1954 aided by Farmers Home Administration credit.

About two-thirds of the funds advanced during 1954 were used by small farmers to improve their farms and farming operations. About one-third of the funds were used by cattlemen and other farmers who had been hard hit by the drought and needed emergency credit to continue their operations. No loans of any type were made to farmers whose credit needs could be met by banks or other lenders.

A large proportion of advances were made to veterans and young families who were establishing better farms, and whose greatest needs were adequate credit and aid in developing sound systems of farming and efficient farm management practices.

Loans to help small farmers buy equipment, fertilizer, and seed, and to pay other costs of improving their farm and home operations totaled $147,357,600.

Loans totaling $35,606,600 were advanced from appropriated funds to help small farmers buy, enlarge, or improve their farms and farm buildings. Another $9,530,800 in real estate credit was advanced for similar purposes by private lenders and insured through the insured mortgage program.

Loans to finance improvements in farm water facilities and irrigation systems, limited until the end of the 1954 fiscal year to the 17 Western States, totaled $6,500,000.

The $93,460,800 advanced to meet emergency needs and to permit farmers to continue normal operations included $35,165,000 in special livestock loans, a program that was established in July 1953.

Despite increased lending operations, the Farmers Home Administration cut its annual administrative costs by about $4,000,000, or about 15 percent. Much of this saving was achieved by combining four area finance offices and the national finance division into one national finance office located in St. Louis. Reorganization of the national and State offices and such streamlining activities as the elimination of duplicate forms and files also contributed to these savings. County supervisors were given the power of final approval on a larger number of loans, thus moving administration of the agency's program closer to farmers.

THE OUTLOOK FOR AGRICULTURE

Most economic signs point to a stable year ahead for agriculture. With employment, production, and purchasing power expected to stay at favorable levels, domestic demand should remain steady, and may even increase somewhat in 1955.

Agricultural prices in 1955 are expected to average about the same as in the fall of 1954. With somewhat lower farm output, this would mean a small reduction in gross farm income. But farm production expenses may drop a little, too. On balance, we expect that net farm income in 1955 will be close to that of 1954.

But what about supply—the other side of the economic scales? Will it become larger, remain about the same, or level off? There are hopeful signs here too.

An abnormal element in the current situation is the large stock position of many farm products. Accumulation of these stocks by the Commodity Credit Corporation has helped to prevent a more severe drop in farm prices—but sooner or later they must be reduced. As long as they are high they will probably prevent any big upswing in farm prices.

These stocks and the heavy output of some livestock products reflect the inertia of agricultural production to adjust to conditions of changing demand. What are the indications for the future? A quick look at some high spots in commodity situations will show how they affect the general agricultural outlook.

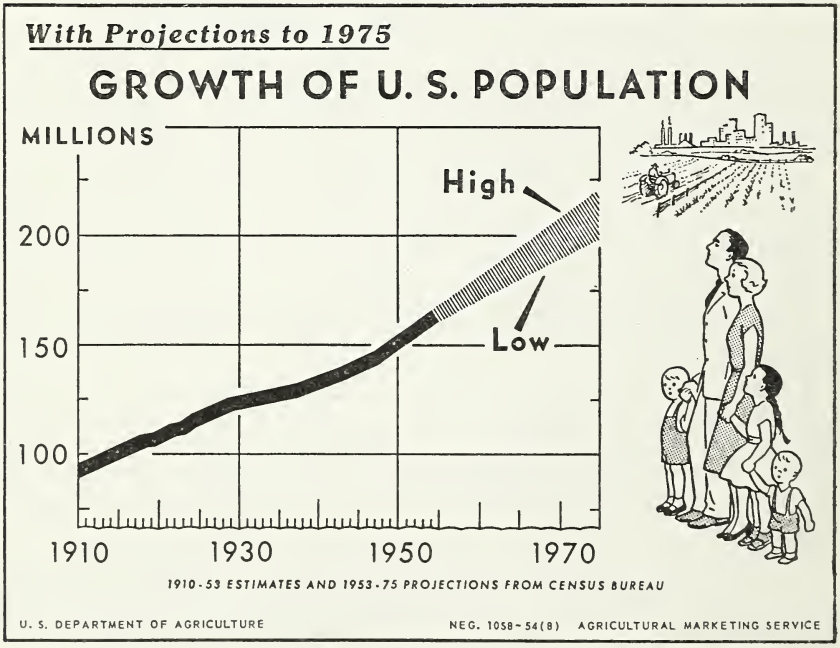
Production of livestock and livestock products in 1955 probably will be at least as large as in 1954. With prospects for a continued high level of demand, prices of livestock products in 1955 may average a little below 1954.

On the whole, moderate flexibility in price supports will be in effect on some 1955 crops. Considerably more flexibility will apply to 1956 crops. Amounts of reduction will depend upon supply conditions which, in turn, depend upon the success or failure of efforts to adjust production and consumption.

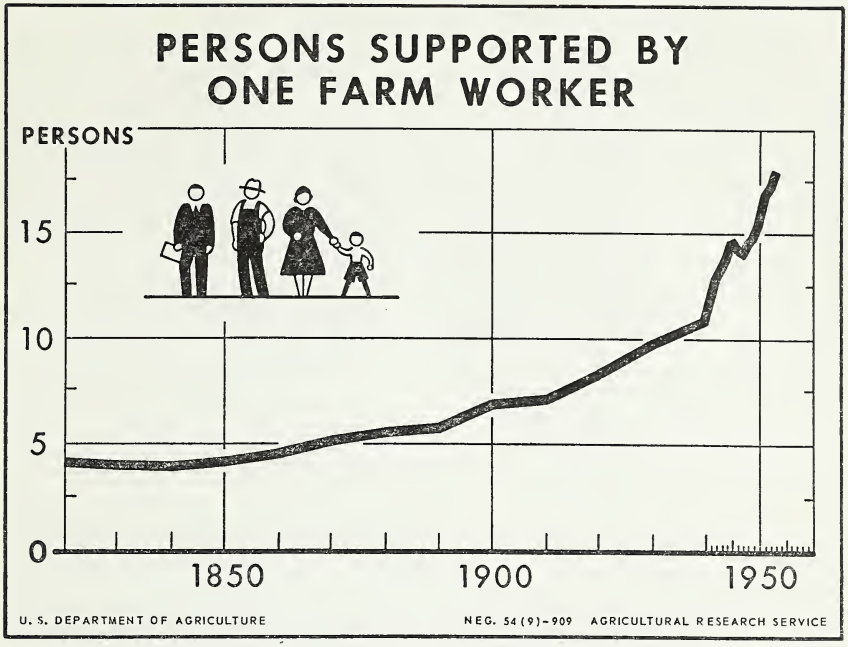
In the next few years, we can expect some of the trends of recent years to continue. Farm population will probably continue to decline, but at a somewhat slower rate. This will mean further mechanization of farming. Farm output will probably increase just about in line with the rise in total population.

All in all, given continued peace and prosperity, agricultural prices should remain relatively steady during the next few years, averaging not far from the levels of 1953 and 1954. In this period, at least, we are not likely to experience extreme shortages of farm commodities, and we should be able to reduce surpluses to manageable levels.

We are entering a period unlike any we have known. It holds vast promise if we succeed in gearing our efforts to the times. We have at hand all the essentials for building an expanding, hugely productive economy. We have the natural resources, the factories, the farms, and the skilled, intelligent people. In agriculture there will be a premium on high production and an increasing use of new techniques, research findings, and mechanical wonders in order to get greater yields from each acre.



The population of the United States has grown from less than 4,000,000 at the time the Constitution was adopted to nearly 162.4 million in mid-1954. With the present low death rate and a medium birth rate, more than 2 million people are being added to the population each year. At this rate, it is likely that by 1975 there will be 200 million or more persons living in this country, or more than double the population of 1910.



In 1840, each farm worker produced enough food, fiber, and tobacco to supply himself and nearly 3 other persons. By 1900, one farm worker produced enough for himself and almost 6 additional consumers. In 1953 one worker produced farm products for himself and almost 17 other persons. Improved technology, both on and off the farm, has enabled farmers to produce more with fewer workers. Much of this increase has occurred since 1940.

Already we are able to see the shadow of things to come. Economists say that the average farmer can increase his income by 25 to 50 percent if he uses all the new tools and techniques and the better breeds, seeds, and feeds.

The intelligent use of fertilizer is of first importance and will be stressed in future farming operations. Of course, fertilizer alone will not bring about the greatly increased production we will eventually need. The effective use of larger amounts of fertilizers will require a highly geared technology in the whole cropping system. In some cases, we will have to have a completely new approach to crops and soils problems.

The recent amazing advances in the processing and packaging of food also foreshadow the future. Powdered fruit concentrates are a reality. Eventually we will have frozen whole milk concentrate and powdered whole milk. The experts in the Department look to the day when virtually all poultry will be quick-frozen or canned for market.

We are on the threshold of perhaps the most revolutionary development of all time in agriculture—the use of fissionable material for power. Atomic energy may someday make our deserts bloom. By desalting sea water and transporting it by cheap atomic power to coastal cities, we may someday be able to retain for agriculture the inland water those cities now require.

Truly, agriculture is entering a remarkable era.

Nobody, of course, can predict how much food will be needed in the future, or what world demand will be. But these facts are evident: We could not put a damper on progress in farming efficiency even if we were foolish enough to want to do so. Abundance going to waste does nobody any good. Therefore, we must use all available measures to better our resources, to push ahead with research and other advances, and to market what we produce. Our future farm programs should be based on abundant production rather than scarcity. Our economy of the future will be one of abundance. It will not be static. We need a dynamic agriculture to keep pace with national development.

All this foreshadows a bright future for agriculture in this country. It is the role of Government to help, not hinder, that future. American agriculture will come to full flower under a system that respects the basic freedoms of the individual, but also demands of him certain fundamental responsibilities as a citizen. There are no one-way streets in a society such as we have developed here in this choice land. He who would enjoy this freedom must also be prepared to defend it—even to the death.

We have been endeavoring to point our agricultural programs toward greater individual freedom. We shall continue to strive for progress down this same road to freedom. With the help and blessing of a kind Providence, and with the welfare of the Nation always as its guide, American agriculture faces tomorrow without fear—without doubt—and with full confidence.

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